

Deney Raporu

Test Report

Müşteri

Customer

: BSi AYDINLATMA SAN. ve TİC. A.Ş.

Adres

Address

: BAŞŞKENT OSB, 20.CAD. B/3 BLOK NO:4 MALİKÖY, SİNCAN, ANKARA / TÜRKİYE

İmalatçı

Manufacturer

: BSi AYDINLATMA SAN. ve TİC. A.Ş.

Teklif Numarası

Order No

: 24-2723-R1

Deney Numunesi

Test Item

: DEKORATİF LED AYDINLATMA ARMATÜRÜ (MODEL: iNoxi L)

Marka

Trade Mark

: BSi

Deney Metodu

Test Method

: IEC 60598-2-2:2023 CMV, TS EN IEC 60598-2-2 :2024

Deney Tarihi

Date of Test

: 30.10.2024 – 05.12.2024

Toplam Sayfa Sayısı

Total Number of Pages

: 66

Basım Tarihi

Date of Issue

: 23.12.2024

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The test and / or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.



Deney Sorumlusu

Person in Charge of Test

Samet KANGI



Bölüm Müdürü

Department Manager

Ata Gürül ARSLANLI



Rapor detaylarını
karekod ile
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1. Numunelerin Tanımı (Definition of the Samples)**DEKORATİF LED AYDINLATMA ARMATÜRÜ (MODEL: iNoxi L)****(24-2723-R1-N1)**

DECORATIVE LED LIGHTING FIXTURE (MODEL: iNoxi L)

Numune Kabul Tarihi Receiving Date	:	24.10.2024
Numune Seri No Serial No	:	AC81025
Tip Type	:	iNoxi L
Kutup Sayısı Number of Poles	:	L, N, PE
Beyan Gerilimi Rated Voltage	U _n :	220 – 240V _{AC}
Beyan Akımı Rated Current	I _n :	-
Beyan Güç Rated Power	P _n :	18W
Beyan Frekans Rated Frequency	:	50 – 60 Hz
Beyan Koruma Derecesi Rated Degree of Protection	:	IP 67
Numune Boyutları Dimensions of the Sample	:	See Documentation of Client.
Numune Ağırlığı Weight of the Sample	kg :	4.067
Sınıf Class	:	I
Cihaz – Malzeme Listesi Device – Component List	:	See Documentation of Client.

2. Deney Sonuçları (Test Results)

Deney sonuçları, müşteri tarafından laboratuvara teslim edilen ve sadece deneyi yapılan numuneye aittir.

The test results only belong to the tested sample delivered to the laboratory by customer.

Numune Sample	Uygulanan Deney Applied Test	Sonuç Result
DEKORATİF LED AYDINLATMA ARMATÜRÜ (MODEL: iNoxi L) DECORATIVE LED LIGHTING FIXTURE (MODEL: iNoxi L)	IEC 60598-2-2:2023 CMV, TS EN IEC 60598-2-2 :2024	Olumlu Passed

3. Çevre Şartları (Environmental Conditions)

3.1	Ortam Sıcaklığı Ambient Temperature	(20 – 30) °C
3.2	Ortam Nemi Ambient Moisture	(30 – 60) %Rh

4. Açıklama (Explanation)

-

5. Deney Metodundan Sapma, Ekleme ve Çıkarmalar

(Deviations, Additions & Cutbacks From the Test Method)

Deneyler; standart deney metoduna göre uygulanmıştır.

Tests were made according to the clauses of the relevant standards.

6. Şartnamelere veya standartlara uygunluk

(Conformity with Requirements or Specifications)

-

7. Görüş ve Yorumlar (Opinions and Interpretations)

-

8. Feragat Beyanı (Disclaimer)

Numune ile ilgili beyan edilen her türlü değer, çizim, doküman, bileşen ve malzeme bilgisi LVT Test Laboratuvarları tarafından kontrol edilmesine rağmen, tüm sorumluluk müşteriye aittir. Raporun taslağına onay verilmesi halinde müşteri bu sorumluluğu kabul etmiş olur.

Although all kinds of ratings, drawings, documents, component and material information declared about the sample are checked by LVT Test Laboratories, all responsibility belongs to the customer. If the draft of the report is approved, the customer accepts this responsibility.

9. Karar Kuralı Tanımı (Definition of Decision Rule)☒ Basit kabul kuralına yönelik ikili beyan

Binary statement for simple acceptance rule

☐ Koruma bantlı ikili beyan

Binary statement with guard band

☐ Koruma bantlı ikili olmayan beyan

Non-binary statement with guard band



Detaylar için kare kodu okutunuz.
Scan the QR code for details.

10. Ölçüm Belirsizliği (*Uncertainty of Measurement*)

—

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11. Deney Uygulamaları (Test applications)

TEST REPORT IEC 60598-2-2 Luminaires Part 2: Particular requirements: Section Two – Recessed luminaires and recessed air-handling luminaires	
Test specification:	
Standard..... :	IEC 60598-2-2:2023 used in conjunction with IEC 60598-1:2020
Test procedure..... :	Type Test
Non-standard test method..... :	N/A
TRF template used..... :	IECEE OD-2020-F1:2022, Ed.1.5
Test Report Form No. :	IEC60598_2_2H
Test Report Form(s) Originator.... :	Intertek Semko AB
Master TRF..... :	Dated 2023-02-21
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Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

bsi Lighting Technologies

Product : iNoxi L - AC81025

Led : 12 x Nichia 219FT

Kelvin : 3000K

Beam : 30°

Wattage / Voltage / Hz : 18W / 220-240V / 50-60Hz

Colour : Stainless Steel

Sealing : IP 67

Safety Class : I



09.10.2024

MADE IN TURKEY



Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

Test item particulars.....	: DECORATIVE LED LIGHTING FIXTURE (MODEL: iNoxi L)
Classification of installation and use	: Class I and normal use.
Supply Connection.....	: Permanently Supply Connection
.....	:
Possible test case verdicts:	
- test case does not apply to the test object: N/A	
- test object does meet the requirement: P (Pass)	
- test object does not meet the requirement: F (Fail)	
Testing.....	
Date of receipt of test item	: 24.10.2024
Date (s) of performance of tests.....	: 30.10.2024 – 05.12.2024
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a ☐ comma / ☒ point is used as the decimal separator.	
Clause numbers between brackets refer to clauses in IEC 60598-1	
General product information: DECORATIVE LED LIGHTING FIXTURE (MODEL: iNoxi L)	

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

Applicable P:Passed, F:Fail, N/A:Not

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.4 (0)	GENERAL TEST REQUIREMENTS		P
2.4 (-)	Measurement of ambient temperature according to Annex A		—
2.4 (0.3)	More sections applicable : Yes ☐ No ☒	Section/s:	—
2.4 (0.5)	Components	(See Annex 1)	—
2.4 (0.7)	Information for luminaire design in light sources standards		—
2.4 (0.7.2)	Light source safety standard :		—
	Luminaire design in the light source safety standard		P
2.5 (2)	CLASSIFICATION OF LUMINAIRES		
2.5 (2.2)	Type of protection :	Class I.	P
2.5 (2.3)	Degree of protection :	IP 67.	—
2.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces :	Yes ☒ No ☐	—
2.5 (2.5)	Luminaire for normal use :	Yes ☒ No ☐	—
	Luminaire for rough service :	Yes ☐ No ☒	—
2.6 (3)	MARKING		P
2.6 (3.2)	Mandatory markings	Necessary information are distinctly and durably marked on the luminaire (see Table 3.1). Each marking in Table 3.1 are read with the corresponding subclause as detailed in the table. See label.	P
	Position of the marking	Labels and markings are positioned so that they can be seen during use and installation.	P
	Format of symbols/text	The label is designed in accordance with the dimensions given in the TS EN IEC 60598-1:2021 standard. See label.	P

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.6 (3.3)	Additional information		P
	Language of instructions	English.	P
2.6 (3.3.1)	Combination luminaires	The luminaire is not combination luminaire.	N/A
2.6 (3.3.2)	Nominal frequency in Hz	50-60Hz	P
2.6 (3.3.3)	Operating temperature	See LED Driver.	N/A
2.6 (3.3.5)	Wiring diagram	The luminaire is connected to the mains with a cable. The connections are in the installation guide. See documentation of client.	P
2.6 (3.3.6)	Special conditions	No special condition.	N/A
2.6 (3.3.7)	Metal halide lamp luminaire – warning	The luminaire does not have metal halide lamp.	N/A
2.6 (3.3.8)	Limitation for semi-luminaires	The luminaire is not semi-luminaire.	N/A
2.6 (3.3.9)	Power factor and supply current		
2.6 (3.3.10)	Suitability for use indoors	The luminaire is not use indoor.	N/A
2.6 (3.3.11)	Luminaires with remote control	The luminaire does not have remote control.	N/A
2.6 (3.3.12)	Clip-mounted luminaire – warning	The luminaire is not clip-mounted luminaire.	N/A
2.6 (3.3.13)	Specifications of protective shields		N/A
2.6 (3.3.14)	Symbol for nature of supply	Symbol for nature of supply is not given, but frequency value is given. This is sufficient for the feed symbol.	N/A
2.6 (3.3.15)	Rated current of socket outlet	The luminaire does not have socket-outlet.	N/A
2.6 (3.3.16)	Rough service luminaire	The luminaire is not rough service luminaire.	N/A
2.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		P
2.6 (3.3.18)	Non-ordinary luminaires with PVC cable	The luminaire does not have supply cord.	
2.6 (3.3.19)	Protective conductor current in instruction if applicable	The supply current of the luminaire is not > 20 A and a protective electric current greater than 10 mA does not create a conductor current.	N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
2.6 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided		N/A
2.6 (3.3.22)	Controllable luminaires, classification of insulation provided	Insulation is provided with internal components. Components are certified according to relevant standards. See documentation of client.	N/A
2.6 (3.3.23)	Luminaire without control gear provided with necessary information for selection of appropriate component	The luminaire is delivered with all connections made. Connection to the main grid is made only by manufacturer personel.	N/A
2.6 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
2.6 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided	The luminaire is not use employing light sources emitting UV.	N/A
2.6 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided	The luminaire does not have external flexible cord or cord longer than 30 cm.	N/A
2.6 (3.4)	Test with water	Tried to remove it by rubbing lightly for 15 s with a piece of cloth soaked with water. There is a tape protection on the label.	P
	Test with hexane	It was rubbed with petroleum ether for another 15 seconds using a cloth. There is a tape protection on the label.	P
	Legible after test	After the test, the marking is legible, marking label is not easily removable and they is show no curling. There is a tape protection on the label.	P
	Label attached		P
2.6.2 (-)	Luminaires with two IP ratings		N/A
2.6.3 (-)	Symbol "not suitable for direct mounting on normally flammable surface", if applicable		N/A
2.6.4 (-)	Symbol "not suitable for covering with thermally insulated material", if applicable		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.7 (4)	CONSTRUCTION		P
2.7 (4.2)	Components replaceable without difficulty	Luminaires incorporating components or parts intended to be replaceable is so designed that there is sufficient space to permit replacement of such components or parts without difficulty and without impairing safety.	P
2.7 (4.3)	Wireways smooth and free from sharp edges	Wireways are smooth and free from sharp edges, burrs, flashes and the like, which might cause abrasion of the insulation of the wiring. Parts such as metal set screws are not protrude into wireways. Compliance is checked by inspection and, if necessary, by dismantling and reassembling the luminaire.	P
2.7 (4.4)	Lamp holders		N/A
2.7 (4.4.1)	Integral lamp holder	The luminaire does not have lampholder.	N/A
2.7 (4.4.2)	Wiring connection		N/A
2.7 (4.4.3)	Lamp holder for end-to-end mounting		N/A
2.7 (4.4.4)	Positioning		N/A
	- pressure test (N)		—
	After test the lamp holder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lamp holder the lamp holder has not moved from its position and shows no permanent deformation		N/A
	- bending test (N)		—
	After test the lamp holder have not moved from its position and show no permanent deformation		N/A
2.7 (4.4.5)	Peak pulse voltage		N/A
2.7 (4.4.6)	Centre contact		N/A
2.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
2.7 (4.4.8)	Lamp connectors		N/A
2.7 (4.4.9)	Caps and bases correctly used		N/A
2.7 (4.4.10)	Light source for lamp holder or connection according to IEC 60061 not connected another way		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.7 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II	The luminaire does not have starter.	N/A
	Starter holder class II construction		N/A
2.7 (4.6)	Terminal blocks		P
	Tails	Adequate space for this terminal block is provided within the luminaire, or within a box delivered with the luminaire, or specified by the manufacturer.	P
	Unsecured blocks	The luminaire does not have unsecured block.	N/A
2.7 (4.7)	Terminals and supply connections		N/A
2.7 (4.7.1)	Contact to metal parts	The luminaire is not a frequently adjusted class I or class II fixed luminaire or portable luminaire.	N/A
2.7 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
2.7 (4.7.3)	Terminals for supply conductors		N/A
2.7 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
2.7 (4.7.4)	Terminals other than supply connection		N/A
2.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
2.7 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
2.7 (4.8)	Switches		N/A
	- adequate rating	The luminaire does not have switches.	N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.7 (4.9)	Insulating lining and sleeves		N/A
2.7 (4.9.1)	Retainment	The luminaire does not have insulating lining or sleeve.	N/A
	Method of fixing.....:		N/A
2.7 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C).....:		N/A
2.7 (4.10)	Double or reinforced insulation		N/A
2.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
2.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
2.7 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lamp holder		N/A
2.7 (4.10.4)	Protective impedance device		N/A
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor		N/A
	Double or reinforced insulation bridged by at least two separate resistors in series or appropriate capacitor(s)		N/A
	Capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.2 of IEC 60065		N/A
2.7 (4.11)	Electrical connections and current-carrying parts		P

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.7 (4.11.1)	Contact pressure	Electrical connections are so designed that contact pressure is not transmitted through insulating material other than ceramic, pure mica or other material with characteristics which are at least equivalent, unless there is sufficient resilience in the metallic parts to compensate for any possible shrinkage of the insulating material. Compliance is checked by inspection.	P
2.7 (4.11.2)	Screws:		P
	- self-tapping screws	Screws are not used in current-carrying sections. Only terminals have screws. The screws used in the terminals comply with this standard.	P
	- thread-cutting screws		P
2.7 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets	The luminaire does not have rivet.	N/A
2.7 (4.11.4)	Material of current-carrying parts	Current-carrying parts is of copper, an alloy containing at least 50 % copper, or a material having at least equivalent characteristics. (Current is carried only by cables.) See documentation of client.	P
2.7 (4.11.5)	No contact to wood or mounting surface	Current-carrying parts are not in direct contact with the mounting surface or wood.	P
2.7 (4.11.6)	Electro-mechanical contact systems	The luminaire does not have electro-mechanical contact system.	N/A
2.7 (4.12)	Screws and connections (mechanical) and glands		P
2.7 (4.12.1)	Screws not made of soft metal	Screws are not made of a material which is soft or liable to creep.	P
	Screws of insulating material	The screw is not made of insulating material.	N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	Torque test: torque (Nm); part	0.50	P
	Torque test: torque (Nm); part	1.20	P
	Torque test: torque (Nm); part		N/A
2.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
2.7 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm).....		N/A
	- lamp holder; torque (Nm)		N/A
	- push-button switches; torque 0,8 Nm.....		N/A
2.7 (4.12.5)	Screwed glands; force (Nm)	The luminaire does not have gland.	N/A
2.7 (4.13)	Mechanical strength		P
2.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....	0.2 J.	P
	- other parts; energy (Nm)	0.35 J.	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		N/A
2.7 (4.13.2)	Metal parts have adequate mechanical strength	Metal parts enclosing live parts does have adequate mechanical strength. Compliance is checked by the appropriate tests of 4.13.3 to 4.13.5.	P
2.7 (4.13.3)	Straight test finger	A straight unjointed test finger is used, with the same dimensions as the standard test finger specified in IEC 60529. The finger is pressed against the surface with a force of 30 N. During the test, metal parts are not touch live parts. After the test, covers are not be excessively deformed and the luminaire is continue to meet the requirements of Section 11.	P
2.7 (4.13.4)	Rough service luminaires		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	- IP54 or higher	The luminaire is not rough service luminaire.	N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
2.7 (4.13.6)	Tumbling barrel		N/A
2.7 (4.14)	Suspensions, fixings and means of adjusting		N/A
2.7 (4.14.1)	Mechanical load:		N/A
	A) four times the weight	The luminaire is installed on the ground.	N/A
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N/A
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
2.7 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
2.7 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles	The luminaire does not have adjusting device.	N/A
	- strands broken		N/A
	- electric strength test afterwards		N/A
2.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
2.7 (4.14.5)	Guide pulleys	The luminaire does not have guide pulley.	N/A
2.7 (4.14.6)	Strain on socket-outlets	The luminaire does not have socket-outlet.	N/A
2.7 (4.15)	Flammable materials		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	- glow-wire test 650°C	See Test Table 2.16 (13.3.2)	N/A
	- spacing ≥ 30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		N/A
	- thermal protection		N/A
	- electronic circuits exempted		N/A
2.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
2.7 (4.16)	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear	(Compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
2.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
2.7 (4.16.2)	Thermal protection:		P
	- in lamp control gear	See documentation of client.	P
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear	80	P
2.7 (4.16.3)	Design to satisfy the test of 12.6	(See clause 12.6)	N/A
2.7 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
2.7 (4.18)	Resistance to corrosion		P

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.7 (4.18.1)	- rust-resistance	Ferrous parts luminaires, the rusting of which might cause the luminaire to become unsafe, is adequately protected against rusting. All grease was removed from the parts to be tested. The parts was then immersed for 10 min in a%10 solution of ammonium chloride in water at a temperature of 25°C. After the parts have been dried for 10 min in a heating cabinet at a temperature of 100°C±5°C, their surfaces was show no s ign of rust. The test was applied only to screws, mounting metal and part of the enclosure.	P
2.7 (4.18.2)	- season cracking in copper		N/A
2.7 (4.18.3)	- corrosion of aluminium	See documantation of client.	P
2.7 (4.19)	Ignitors compatible with ballast	The luminaire does not have ignitor.	N/A
2.7 (4.20)	Rough service vibration	The luminaire is not rough service luminaire.	N/A
2.7 (4.21)	Protective shield		N/A
2.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
2.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
2.7 (4.21.3)	No direct path		N/A
2.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 2.16 (13.3.2)	N/A
2.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
2.7 (4.23)	Semi-luminaires comply Class II		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.7 (4.24)	Photobiological hazards		*N/A
2.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		*N/A
2.7 (4.24.2)	Retinal blue light hazard		*N/A
	Class of risk group assessed according to IEC/TR 62778		—
	Luminaires with E_{thr} :		*N/A
	a) Fixed luminaires		*N/A
	- distance x m, borderline between RG1 and RG2		*N/A
	- marking and instruction according 3.2.23		*N/A
	b) Portable and handheld luminaires		*N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		*N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		*N/A
2.7 (4.25)	Mechanical hazard		P
	No sharp point or edges	Luminaire does have no sharp points or edges that could, during installation, normal use, or maintenance, create a hazard for the user.	P
2.7 (4.26)	Short-circuit protection		N/A
2.7 (4.26.1)	Adequate means of uninsulated accessible SELV or PELV parts	The luminaire does not have uninsulated accessible SELV or PELV parts of opposite polarity.	N/A
2.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A

* Deney/Deneyler akreditasyon kapsamı dahilinde değildir.

* The test/tests are not within the scope of accreditation.

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.7 (4.27)	Terminal blocks with integrated screwless earthing contacts		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
2.7 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
2.7 (4.29)	Luminaires with non-replaceable light source		N/A
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
2.7 (4.30)	Luminaires with non-user replaceable light source		N/A
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	One fixing means requiring the use of a tool for its removal		N/A
2.7 (4.31)	Insulation between circuits		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3	The luminaire does not have controllable luminaire.	N/A
2.7 (4.31.1)	SELV or PELV circuits		P
	Used SELV or PELV source		P

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	Voltage $\leq$ ELV		P
	PELV circuit shall have one pole connected to functional earth	The luminaire does not have PELV circuit.	N/A
	The connection between PELV and earth shall comply with functional earth		N/A
	Insulating of SELV or PELV circuits from LV supply		P
	Insulating of SELV or PELV circuits from other non SELV circuits		N/A
	Insulating of SELV or PELV circuits from FELV	The luminaire does not have FELV circuit.	N/A
	Insulating of SELV or PELV circuits from other SELV or PELV circuits		N/A
	SELV or PELV circuits insulated from accessible parts according Table X.1		P
	Plugs not able to make any electrical contact socket-outlets of other voltage systems	The luminaire does not have plug.	N/A
	Socket outlets does not admit plugs of other voltage systems	The luminaire does not have socket-outlet.	N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
2.7 (4.31.2)	FELV circuits		N/A
	Used FELV source	The luminaire does not have FELV circuit.	N/A
	Voltage $\leq$ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
2.7 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1		P
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
2.7 (4.32)	Overvoltage protective devices		N/A
	Comply with IEC 61643-11	The luminaire does not have overvoltage protective device.	N/A
	External to control gear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
2.7(4.33)	Luminaire powered via information technology communication cabling		N/A
	Luminaire shall fulfil the requirement for Class III		N/A
	Rated voltage of luminaire shall be within range of ES1, not exceed maximum voltage rated to used connector		N/A
	The luminaire shall be designed in line with the limits of the electrical parameters of a PSE.		N/A
	No hazard with 130% rated input voltage minimum 7.5VDC for circuit greater than 5VDC		N/A
	No hazard with 150% rated input voltage for circuit equal to or less than 5VDC		N/A
2.7(4.34)	Electromagnetic field (EMF)		N/A
	Compliance to IEC 62493:2015		N/A
2.7(4.35)	Protection against moving fan blades		N/A
	Fan blades not accessible when installed and wired as in normal use and replacing light sources or components	The luminaire does not have fan blades.	N/A
	This test is not necessary for fans have leading edges and tips rounded with a radius of not less than 0,5mm and:		N/A
	Hardness less than D60 Shore, or		N/A
	Peripheral speed less than 15m/s supplied with rated voltage, or		N/A
	Fan has input power not exceeding 2W supplied with rated voltage.		N/A
2.7(4.36)	Track-mounted luminaires		N/A
	Tested according to Annex A of IEC 60570	The luminaire is not track-mounted luminaire.	N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.8 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
2.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according to Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		P
2.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Control gear marked with $\hat{U}_{OUT}$ and f_{UOUT} according to IEC 61347-1, clause 7.1, item w	See Test Table 2.8 (11.2) II	N/A
	- Requirements according to IEC 60664-4 for control gear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A
2.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Control gear marked with U_P	See Test Table 2.8 (11.2) II	N/A
	- Requirements according to IEC 60664-4 for control gear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A

2.9 (7)	PROVISION FOR EARTHING		P
2.9 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance $< 0,5 \Omega$: 0.035		P
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a groove		N/A
	Earth makes contact first		P
	Terminal blocks with integrated screwless earthing contacts tested according to Annex V	No such part.	N/A
	Protective earthing of the luminaire not via built-in control gear		P
2.9 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		P
2.9 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P

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Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	Terminal blocks with integrated screwless earthing contacts tested according to Annex V		P
2.9 (7.2.5)	Earth terminal integral part of connector socket		P
2.9 (7.2.6)	Earth terminal adjacent to mains terminals		P
2.9 (7.2.7)	Electrolytic corrosion of the earth terminal		P
2.9 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
2.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
2.9 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P
2.9 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

2.10 (14)	SCREW TERMINALS		N/A
	Separately approved; component list	(See Annex 1)	N/A
	Part of the luminaire	(See Annex 3)	N/A

2.10 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		N/A
	Separately approved; component list.....:	(See Annex 1)	N/A
	Part of the luminaire	(See Annex 4)	N/A

2.11 (5)	EXTERNAL AND INTERNAL WIRING		P
2.11 (5.2)	Supply connection and external wiring		P
2.11 (5.2.1)	Means of connection		P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c./25V peak interrupted DC voltage with frequency between 10Hz and 200Hz or protected from outdoor environment		P
2.11 (5.2.2)	Type of cable	Supply cord is not provided.	N/A
	Nominal cross-sectional area (mm ²)		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
2.11 (5.2.3)	Type of attachment, X, Y or Z		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.11 (5.2.5)	Type Z not connected to screws		N/A
2.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
2.11 (5.2.7)	Cable entries through rigid material have rounded edges	The luminaire does not have rigid material.	P
2.11 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed	The luminaire does not have rigid material.	N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
2.11 (5.2.9)	Locking of screwed bushings		N/A
2.11 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion	The luminaire does not have cord anchorage.	N/A
	- clear how to be effective		N/A
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
2.11 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
2.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
2.11 (5.2.10.3)	Tests:		N/A

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Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	- impossible to push cable; unsafe		N/A
	- pull test: 25 times; pull (N).....:		N/A
	- torque test: torque (Nm).....:		N/A
	- displacement ≤ 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
	- function independent of electrical connection		N/A
2.11 (5.2.10.4)	Exemption from cord anchorage test in 5.2.10.3 if maximum current 2A, including short circuit current.	The luminaire is Class I luminaire.	N/A
	Prior to the operation of an overcurrent limiting device and the following conditions and test requirements are met		N/A
	Ordinary SELV Class III luminaire at voltage not exceeding 25Vrms or 60VDC		N/A
	Ordinary PELV Class III luminaire at voltage not exceeding 12Vrms or 30VDC		N/A
	Other than ordinary Class III luminaire at voltage not exceeding 12Vrms or 30VDC		N/A
	Pull test 30N for 1min		N/A
2.11 (5.2.11)	External wiring passing into luminaire		N/A
2.11 (5.2.12)	Looping-in terminals		N/A
2.11 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
2.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
2.11 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)	The luminaire is Class I luminaire.	N/A
2.11 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	For appliance inlet or connector systems according to IEC 61984, additional requirements apply:		N/A
	a) Polarization		N/A
	b) Protection against electric shock		N/A

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Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	c) Mechanical locking		N/A
	d) Early contact making		N/A
	e) Protection against short circuit poles		N/A
	f) Cable Clamp		N/A
2.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
2.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083	The luminaire does not have plug.	N/A
	- other standard		N/A
2.11 (5.3)	Internal wiring		P
2.11 (5.3.1)	Internal wiring of suitable size and type	Size: 0.75mm ² . Type: H05RR-F.	P
	Through wiring		P
	- not delivered/ mounting instruction		P
	- factory assembled		P
	- socket outlet loaded (A).....:	The luminaire does not have socket-outlet.	N/A
	- temperatures.....:	(See Annex 2)	P
	Green-yellow for earth only		P
2.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²).....:	0.75mm ² .	P
	Insulation thickness (mm).....:	Cable does have certificate. See documantation of client.	N/A
	Extra insulation added where necessary		N/A
2.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm ²).....:	The luminaire does not have current-limiting device.	N/A
2.11 (5.3.1.3)	Double or reinforced insulation for class II	The luminaire is Class I luminaire.	N/A
2.11 (5.3.1.4)	Conductors without insulation	No such part.	N/A
2.11 (5.3.1.5)	SELV current-carrying parts		N/A
2.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
2.11 (5.3.2)	Sharp edges etc.		P

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Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
2.11 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed	The luminaire does not have insulating bushing.	N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
2.11 (5.3.4)	Joints and junctions effectively insulated		N/A
2.11 (5.3.5)	Strain on internal wiring	Internal wiring does not protrude outside the enclosure.	N/A
2.11 (5.3.6)	Wire carriers		N/A
2.11 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
2.11 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(See Annex 2)	N/A
	No damage to luminaire wiring after test		N/A

2.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
2.12 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	The luminaire is fixed luminaire.	N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lamp and starter holders in portable and adjustable luminaires comply with double or reinforced insulation requirements	The luminaire does not have starterholder.	N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		N/A
	Double-ended tungsten filament lamp	The luminaire does not have tungsten filament lamp.	N/A
	Insulation lacquer not reliable		N/A
	Double-ended high-pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
2.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position	The luminaire is fixed luminaire.	N/A
2.12 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement	The luminaire is Class I luminaire.	N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
2.12 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be earthed	The luminaire does not have BC lampholder.	N/A
2.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V)		N/A
	- no-load voltage (V)		N/A
	- touch current if applicable (mA)		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V)		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
2.12 (8.2.3.d)	PELV circuit may have exposed current carrying parts under the following conditions:		N/A
	For ordinary luminaires voltage not exceed 12 VRMS or 30VDC (under load and no load)		N/A
	For other than ordinary, voltage nor exceed 12 VRMS or 30VDC (under load and no load)		N/A
	If voltage exceed, only the earthed pole may be accessible, other pole shall be insulated accordance with 10.2.2		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	Class III luminaires are accepted by connection to SELV source or PELV source		N/A
2.12 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
2.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
2.12 (8.2.6)	Covers reliably secured		P
2.12 (8.2.7)	Luminaire other than below with capacitor > 0,5 µF not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 µF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 µF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
2.12 (-)	Parts within ceiling space provide same degree of protection against electric shock as parts below ceiling space		N/A

2.13 (12)	ENDURANCE TEST AND THERMAL TEST		P
2.13.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) specified in 2.14		—
2.13.2 (-)	Luminaire mounted and tested according to Annex B		—
2.13 (12.2)	Selection of lamps and ballasts		—
	Lamp used according to Annex B	(Lamp used see Annex 2)	—
	Control gear if separate and not supplied	(Control gear used see Annex 2)	—
2.13 (12.3)	Endurance test		P
	a) mounting-position	Normal use.	—
	b) test temperature (°C).....	35 °C.	—
	c) total duration (h)	240 h.	—
	d) supply voltage (V)	264 V.	—
	d) if not equipped with control gear, constant voltage/current (V) or (A)	-	—
	e) luminaire ceases to operate		—
2.13 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	- no damage to track system	The luminaire does not have track system.	N/A
	- marking legible		P
	- no cracks, deformation etc.		P
2.13 (12.4)	Thermal test (normal operation)	(See Annex 2)	P
2.13 (12.5)	Thermal test (abnormal operation)	(See Annex 2)	N/A
2.13 (12.6)	Thermal test (failed lamp control gear condition):		N/A
2.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		—
	- case of abnormal conditions		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un :		—
	- measured mounting surface temperature (°C) at 1,1 Un		N/A
	- calculated mounting surface temperature (°C) :		N/A
	- track-mounted luminaires		N/A
2.13 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C) :		N/A
	- track-mounted luminaires		N/A
2.13 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
2.13 (12.7.1)	Luminaire without temperature sensing control		N/A
2.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V)		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	Test according to Annex W:	N/A
	- case of abnormal conditions	—
	- measured winding temperature (°C): at 1,1 Un :	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	—
	- calculated temperature of fixing point/exposed part (°C)	—
	Ball-pressure test	See Test Table 2.16 (13.2.1) N/A
2.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA	N/A
	- case of abnormal conditions	—
	- measured winding temperature (°C): at 1,1 Un :	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	—
	- calculated temperature of fixing point/exposed part (°C)	—
	Ball-pressure test	See Test Table 2.16 (13.2.1) N/A
2.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA	N/A
	- case of abnormal conditions	—
	- Components retained in place after the test	N/A
	- Test with standard test finger after the test	N/A
2.13 (12.7.2)	Luminaire with temperature sensing control	N/A
	- thermal link	Yes ☐ No ☐ —
	- manual reset cut-out	Yes ☐ No ☐ —
	- auto reset cut-out	Yes ☐ No ☐ —
	- case of abnormal conditions	—
	- highest measured temperature of fixing point/exposed part (°C):	—
	Ball-pressure test:	See Test Table 2.16 (13.2.1) N/A
2.13.3 (-)	Wiring, for connection to the supply, not reach unsafe temperature	P
	- measured temperature of the cable (°C)	P
2.13.4(-)	Test for air-handling luminaires under static operating conditions:	N/A
	- Normal operation	N/A
	- Abnormal operation	N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.14 (9)	RESISTANCE TO DUST AND MOISTURE		P
2.14 (-)	If IP > IP 20 the order of tests as specified in clause 2.13		P
2.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IP67.	—
	- mounting position during test.....	Normal use.	—
	- fixing screws tightened; torque (Nm).....		—
	- tests according to clauses	Clause 9.2.2 and 9.2.8.	—
	- electric strength test afterwards	500 V, 1480 V and 2960 V.	P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire	IP6X.	P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry	The luminaire does not have drain hole.	N/A
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire or high pressure and temperature water jet-proof luminaire or high pressure and cold water jet-proof luminaire		P
	e) no contact with live parts (IP 2X)	IP6X.	N/A
	e) no entry into enclosure (IP 3X and IP 4X)	IP6X.	N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)	IP6X.	N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		P
2.14 (9.3)	Humidity test 48 h	%93 Rh, 25°C.	P

2.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
2.15 (10.2.1)	Insulation resistance test	The insulation resistance is measured with a DC voltage of approximately 500V and 100V, 1 min after the application of the voltage.	P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		—
	Insulation resistance (MΩ).....		—
	SELV/PELV		P

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	- between current-carrying parts of different polarity		N/A
	- between current-carrying parts and mounting surface		P
	- between current-carrying parts and metal parts of the luminaire		P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5 .:	The luminaire does not have insulating bushing.	N/A
	Other than SELV/PELV		P
	- between live parts of different polarity.....		N/A
	- between live parts and mounting surface.....		P
	- between live parts and metal parts		P
	- between live parts of different polarity through action of a switch.....		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5 .:	The luminaire does not have insulating bushing.	N/A
2.15 (10.2.2)	Electric strength test		P
	Dummy lamp	The luminaire does not have dummy lamp.	N/A
	Luminaires with ignitors after 24 h test	The luminaire does not have ignitor.	N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V).....	500V, 1480V, 2960V.	P
	SELV/PELV		P
	- between current-carrying parts of different polarity		N/A
	- between current-carrying parts and mounting surface.....	500V applied.	P
	- between current-carrying parts and metal parts of the luminaire	500V applied.	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5 .:	The luminaire does not have insulating bushing.	N/A
	Other than SELV/PELV		P

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

	- between live parts of different polarity.....:		N/A
	- between live parts and mounting surface.....:	1480V applied.	P
	- between live parts and metal parts	1480V applied.	P
	- between live parts of different polarity through action of a switch.....:		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5 .:	The luminaire does not have insulating bushing.	N/A
2.15 (10.3)	Touch current or protective conductor current (mA):	0.02 mA	P

2.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		N/A
2.16 (13.2.1)	Ball-pressure test	See Test Table 2.16 (13.2.1) The terminal is certified. The manufacturer confirms its suitability. See documentation of client	N/A
2.16 (13.3.1)	Needle-flame test (10 s).....	See Test Table 2.16 (13.3.1) The terminal is certified. The manufacturer confirms its suitability. See documentation of client	N/A
2.16 (13.3.2)	Glow-wire test (650°C)	See Test Table 2.16 (13.3.2) The terminal is certified. The manufacturer confirms its suitability. See documentation of client	N/A
2.16 (13.4)	Proof tracking test (IEC 60112).....	See Test Table 2.16 (13.4) The terminal is certified. The manufacturer confirms its suitability. See documentation of client	N/A

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.8 (11.2)	TABLE I: Creepage distances and clearances						P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						P
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						P
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	R	4.66	3	11.1.B	10.08	5	11.1.A
Working voltage (V)					220 – 240 V _{AC}		—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U _P if applicable (kV)							—
Supplementary information: Driver							
Distance 2:							
Working voltage (V)							—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U _P if applicable (kV)							—
Supplementary information:							
Distance 3:							
Working voltage (V)							—
PTI					< 600 ☐ ≥ 600 ☐		—
Pulse voltage or U _P if applicable (kV)							—
Supplementary information:							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.8 (11.2)	TABLE II: Creepage distances and clearances						N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages							
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2							
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:							
Working voltage (V)							—
Frequency if applicable (kHz).....							—
PTI					< 600 ☐ ≥ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—
Supplementary information:							
Distance 2:							
Working voltage (V)							—
Frequency if applicable (kHz).....							—
PTI					< 600 ☐ ≥ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—
Supplementary information:							
Distance 3:							
Working voltage (V)							—
Frequency if applicable (kHz).....							—
PTI					< 600 ☐ ≥ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—
Supplementary information:							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.16 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			N/A
Allowed impression diameter (mm):		2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Supplementary information:				

2.16 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				N/A
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Supplementary information:					

2.16 (13.3.2)	TABLE: Resistance to heat and fire - Glow wire tests				N/A
Object/ Part No./ Material	Manufacturer/ trademark	GWT (°C): 650			Verdict
		t _E (s)	t _I (s)	t _R (s)	
Ignition of the specified layer placed underneath the test specimen (Yes/No)					
Supplementary information:					

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

2.16 (13.4)	TABLE: Proof tracking test (IEC 60112)				N/A
Test voltage PTI		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Supplementary information:					

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
LED	C	NICHIA	NICHIA 219FT	I _F :1800 mA T _{opr} : -40 ~ 100	-	DataSheet
LED Module	C	MSM AYDINLATMA	P-733-211	900mA 27V _{DC} 24W	IEC 62031	Intertek Certificate Number: 202100297TUR- 001
Driver	C	VOSSLOH SCHWABE	ECXe 500.479	U _n :220-240V U _{rated} : 10-42V U _{max} : 52V I _{max} :160mA	IEC 61347-1 IEC 61347-2	CB Test Certificate Number: NO113639
Lens	C	LIMBUS	TLS01NI- D20-25- Tape	Operating Temperature: 40°C ~ + 90°C max	-	DataSheet
Blend	C	REKSAN	REK.06.413	-20 +100 °C	EN60079-0 EN60079-1 EN60079-7	Certificate Number: RKSAN101

Supplementary information:

¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.

The codes above have the following meaning:

- A - The component is replaceable with another one, also certified, with equivalent characteristics
- B - The component is replaceable if authorised by the test house
- C - Integrated component tested together with the appliance
- D - Alternative component

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Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

ANNEX 2	TABLE: Thermal tests of Section 12			P			
	Type reference..... :	Vossloh Schwabe	—				
	Lamp used..... :	LED (NICHIA 219FT)	—				
	Lamp control gear used..... :	Vossloh Schwabe ECXe 500.479	—				
	Mounting position of luminaire..... :	Normal use.	—				
	Supply wattage (W)..... :	19.3 W.	—				
	Supply current (A)..... :	0.090 A.	—				
	Temperatures in test 1 - 4 below are corrected for t_a (°C)..... :		—				
	- abnormal operating mode..... :		—				
2.13 (12.4)	- test 1: rated voltage..... :	220 – 240	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	255	—				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage..... :		—				
	Through wiring or looping-in wiring loaded by a current of A during the test..... :		—				
2.13 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :		—				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
LED Driver	25.1 – 25.6 – 25.8	69.4 – 70.0	68.5	-	80	-	-
LED Cooling	25.1 – 25.6 – 25.8	55.2 – 55.6	53.6	-	90	-	-
In Enclosure	25.1 – 25.6 – 25.8	34.0 – 34.5	32.4	-	90	-	-
In Enclosure (Up)	25.1 – 25.6 – 25.8	46.3 – 46.2	44.3	-	90	-	-
Enclosure (Out)	25.1 – 25.6 – 25.8	34.6 – 34.9	32.9	-	90	-	-
Cable	25.1 – 25.6 – 25.8	25.1 – 25.8	25.8	-	90	-	-
Enclosure (Under)	25.1 – 25.6 – 25.8	37.4 – 37.8	35.8	-	90	-	-
Supplementary information:							

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Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm ²).....:		—
(14.3.3)	Conductor space (mm)		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread)	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm).....:		N/A
	Torque (Nm).....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N)		N/A
(14.4.8)	Without undue damage		N/A

ANNEX 4	Screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A

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Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples) ...:		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples)		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N)		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

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Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

(15.6.3.1) (15.6.3.2)	TABLE: Contact resistance test / Heating tests										N/A
	Voltage drop (mV) after 1 h										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop of two inseparable joints										
	Voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV)										—
											
	:										
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop after 50th alt. 100th cycle										
	Max. allowed voltage drop (mV)										—
											
	:										
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV)										—
											
	:										
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 50th alt. 100th cycle										
	Max. allowed voltage drop (mV)										—
											
	:										
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
Supplementary information:											

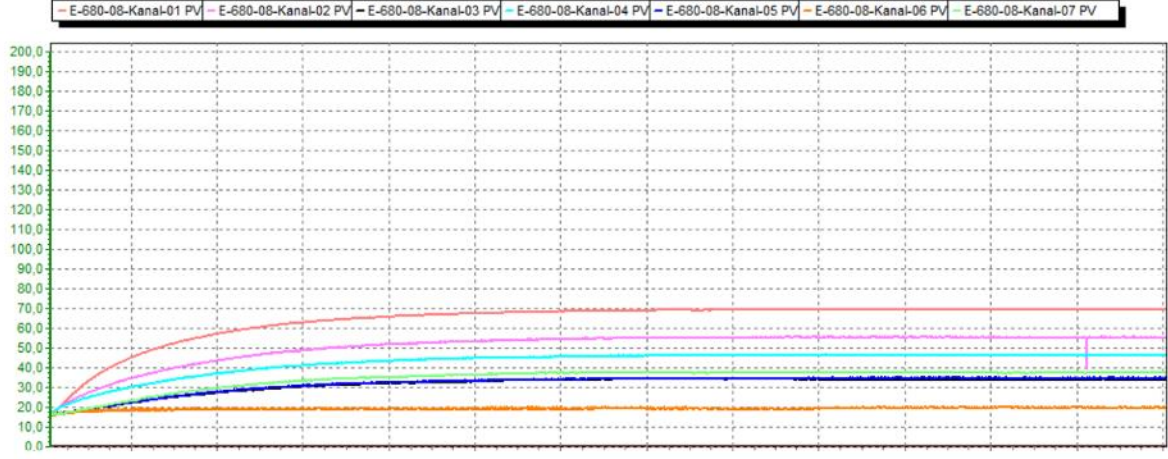
Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

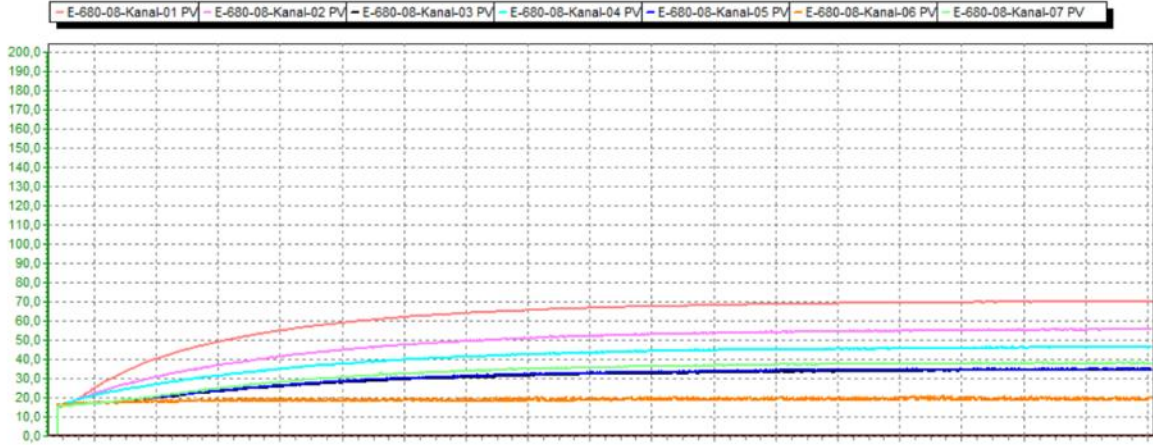
12. Deney ve Ölçüm Bilgileri (Test and measuring arrangement)

Cihaz Device	İmalatçı Manufacturer	Cihaz Kodu Device Code	Sertifika No Certificate No	Kalibrasyon Bitiş Tarihi Calibration Due Date
Humidity Temperature Meter	CEM	LD222	4014020	August/2025
Multimeter	FLUKE	LD377	4014014	August/2025
Humidity Cabinet	NÜKLEON	LD140	D-15812-0001	September/2025
Perforated Metal Housing	LVT	LD461	-	No Need Calibration
Digital Scale	YILDIRIM TARTI	LD291	2449133	September/2025
Torquemeter	BRITTOOL / AVT 300A	LD14	2336820	August/2026
Torque Screwdriver	NETRATEK/5-10 N.m	LD396	2338990	August/2026
Torque Screwdriver	NETRATEK/1-6 N.m	LD397	2338989	August/2026
Digital Caliper	STAINLESS HARDENED	LD390	2445824	September/2025
Test Finger	-	LD131	2336845	July/2026
Digital Newtonmeter	PCE-FM200	LD248	2333231	July/2026
Temperature Rise Data Logger	ELİMKO	LD80	4411001	September/2025
CE MULTITESTER	METREL	LD384	2400967D2	February/2025
Power Measurement	ROSYXANDY / ELETECPRO	LD382	2405684	September/2025
Osilloscope	HANTEK / DSO4204B	LD374	2405761	September/2025
Spring Hammer Hammer (0,2J)	-	LD142	2325963	May/2025
Spring Hammer Hammer (0,35J)	-	LD143	2325967	May/2025
Digital Newtonmeter	PCE-FM200	LD248	2445831	September/2025
Test Probe	LVT	LD132	22M04235	May/2025
Touch Current Measuring Circuit (Figure 5)	SINUO TESTING EQUIPMENT / SN2210-54	LD440	E23111933	December/2025
Touch Current Measuring Circuit (Figure 4)	SINUO TESTING EQUIPMENT / SN2210-54A	LD441	E23111932	December/2025

13. Sıcaklık Osilogramları (Test Oscillograms)



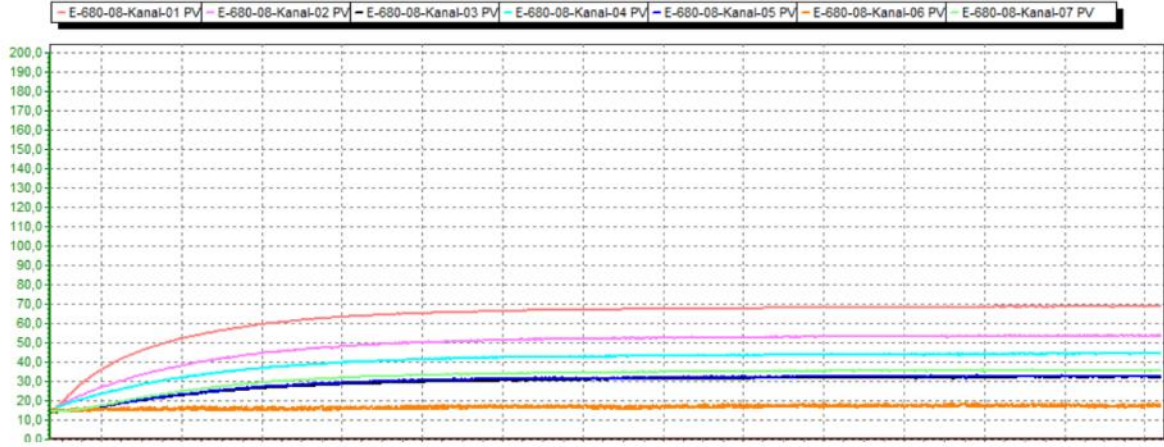
220 V_{AC} Temperature Rise Test



240 V_{AC} Temperature Rise Test

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires



255 V_{AC} Temperature Rise Test

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

14. Deney Fotoğrafları (Test photographs)



Photograph 1: General View



Photograph 2: General View

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires



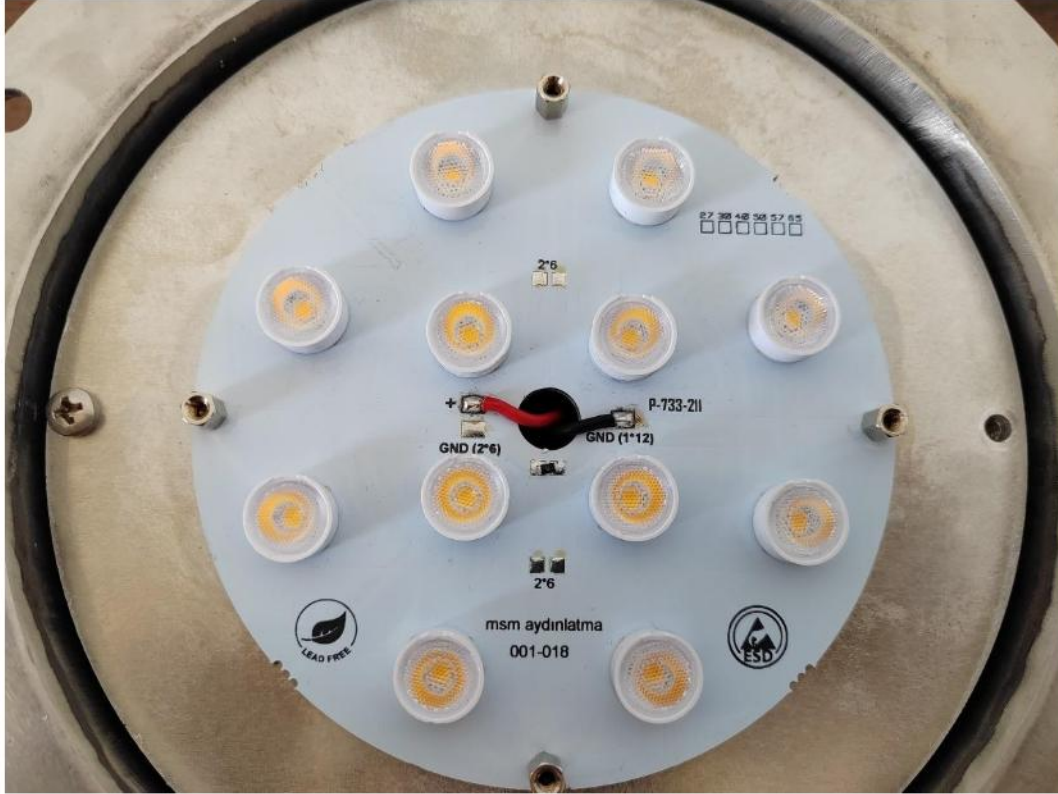
Photograph 3: General View



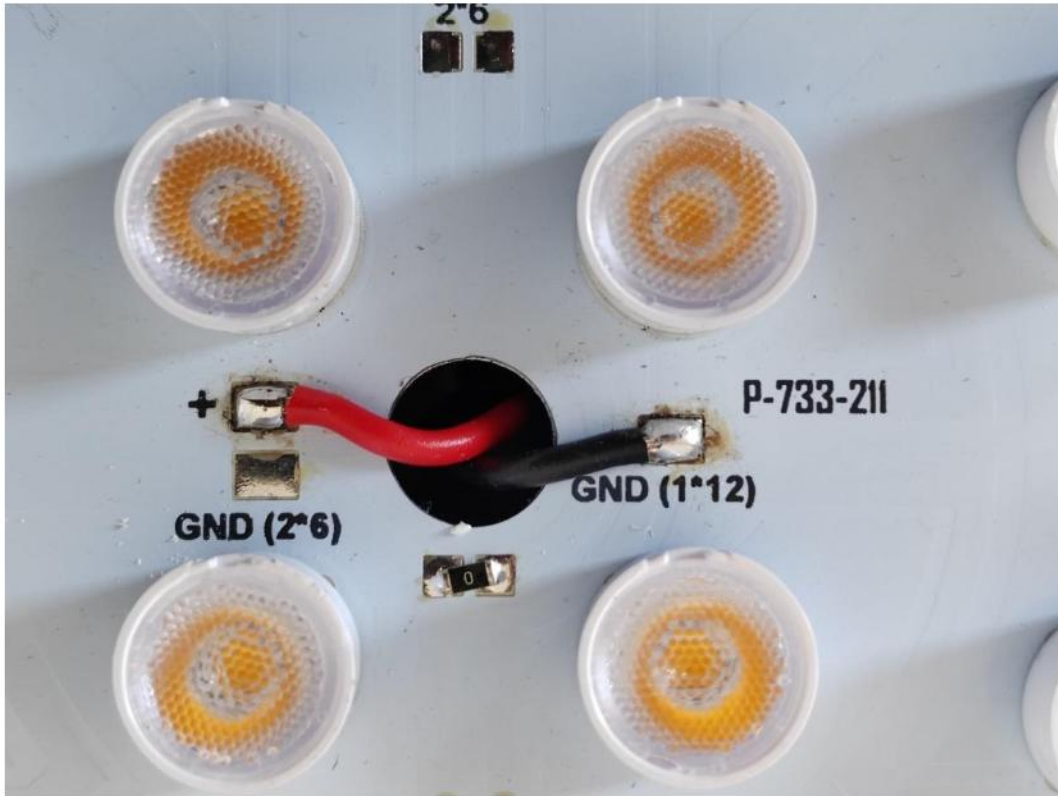
Photograph 4: General View

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

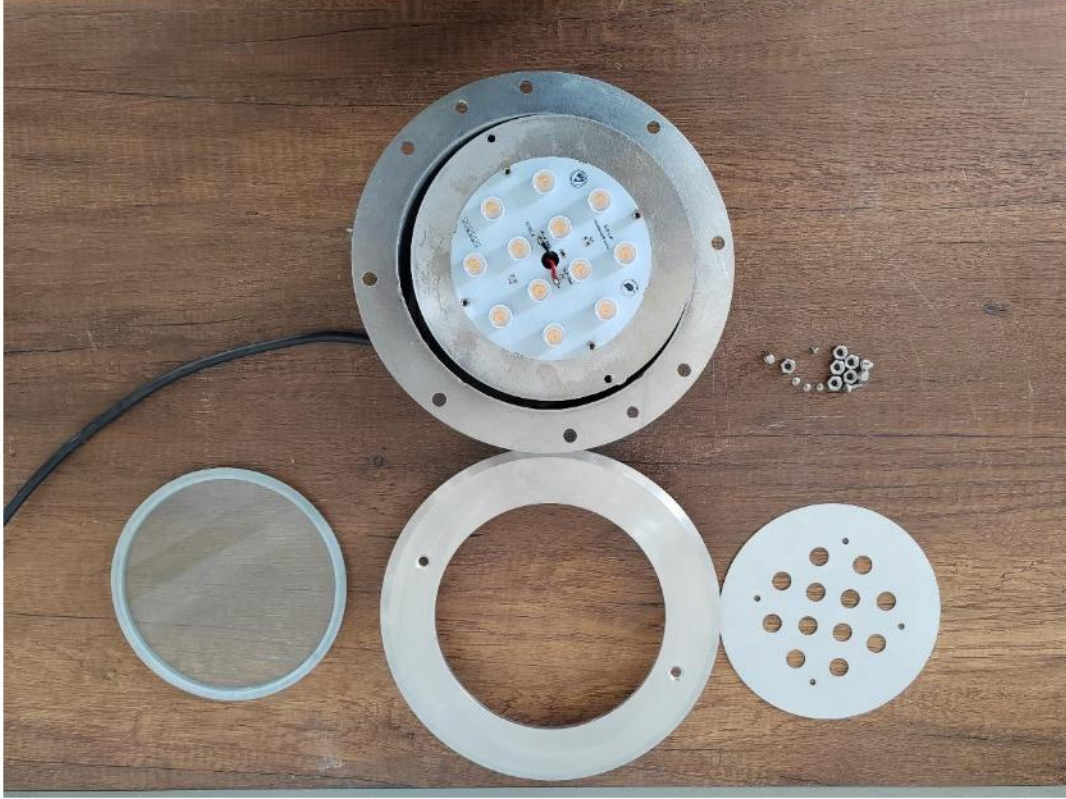
Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires



Photograph 5: LED Module



Photograph 6: Lens and Cable Connection



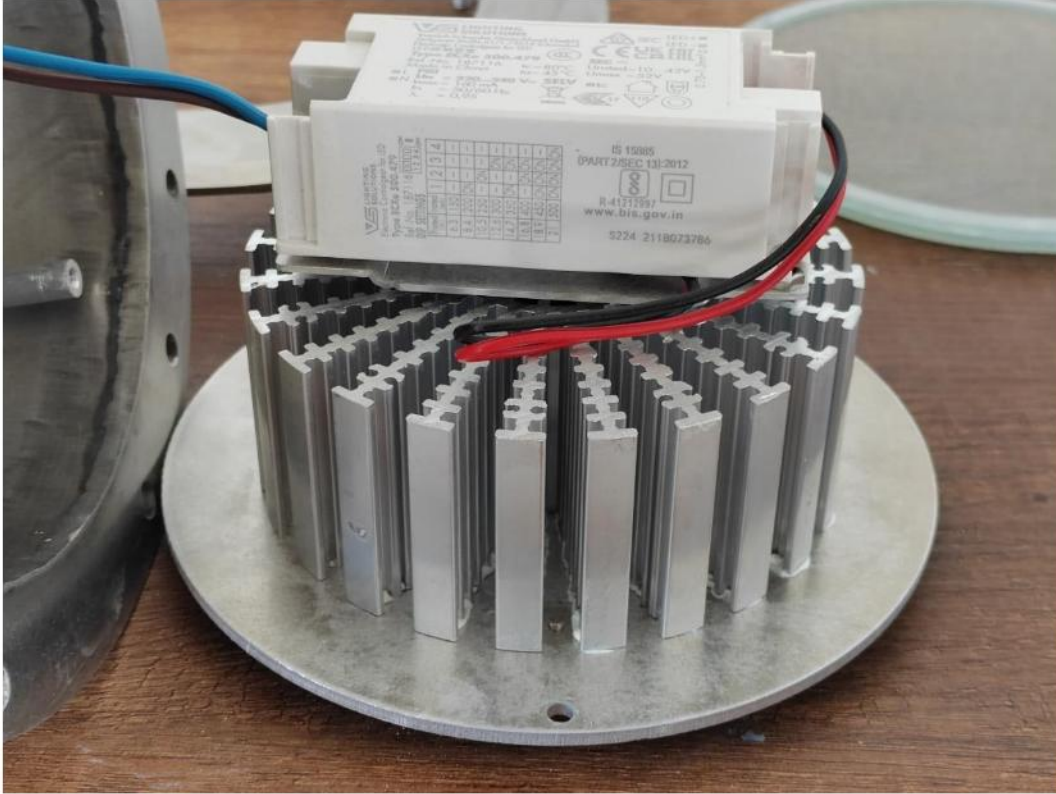
Photograph 7: General View



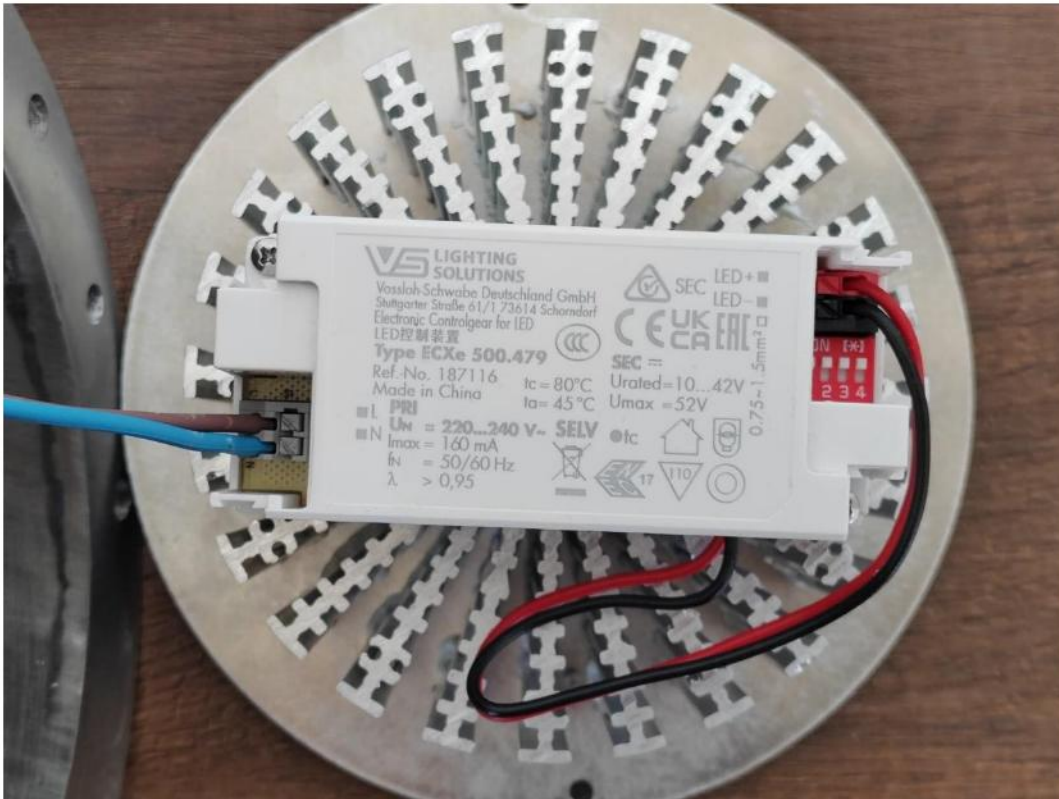
Photograph 8: General View

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires



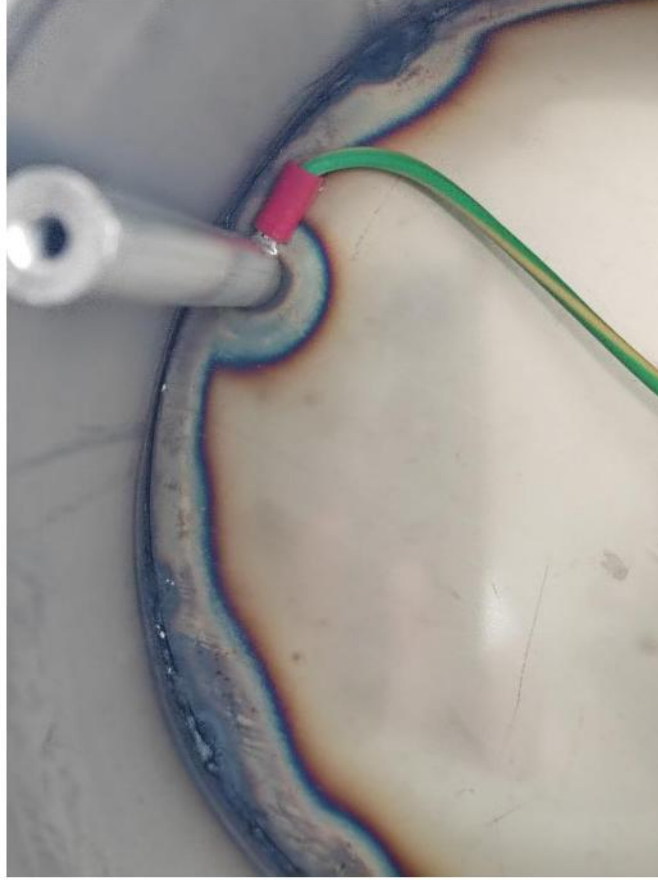
Photograph 9: LED Cooler



Photograph 10: LED Driver

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires



Photograph 11: Earth Connection

15. Firma Dokümanları (Documentation of customer)



INOXI WALL INSTALLATION GUIDE



PRODUCT FEATURES:

Compact drive-over and walk over inground recessed LED luminaire designed for illuminating building facades, green areas, parks and outdoor facilities.
With the use of high-power LEDs, the in-ground light range provides high luminosity at a low power consumption.
Adapting a double insulation method, all in-ground lights have an IP67 ranking featuring thick tempered glass.
Designed to last in extremely harsh environments.
Monochrome or DALI controllable.
Easy to install with the integrated universal power supply and connect via combined cable gland.

NOTES:

- Technical amendments are reserved.
- CE – Conformity mark
- The manufacturer is then discharged from liability when damage is caused by improper use or installation.
- Clean luminaire regularly with solvent-free cleansers from dirt and deposits. Do not use high pressure cleaners.

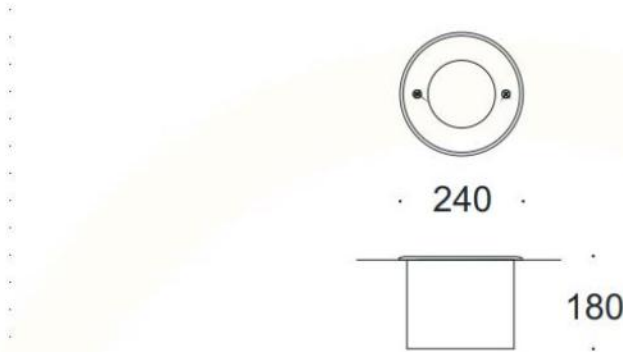
Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires



INOXI WALL INSTALLATION GUIDE

TECHNICAL DRAWING:



INFORMATION:

CODE	POWER CONSUMPTION	LUMEN OUTPUT (lm), 3000K / 4000K	COLOUR TEMPERATURE
AC81025	18W	1980/2160	3000K / 4000K

RECOMMENDATIONS FOR THE USER:

- 1) Have the luminaire installed only by the manufacturer or his service agent or a similar qualified person.
- 2) Before the installation, make sure that there is no voltage.
- 3) Do not touch the fitting when it is working on / switched on.
- 4) Do not look at the fitting directly or from a short distance.
- 5) Disconnect / switch off the fitting before changing the lamps
- 6) The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.
- 7) Use the product with 220-240VAC and 50/60Hz mains voltage.
- 8) Make sure the connections are tight and correct.
- 9) It includes a Y type connection. (If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.)

Aydınlatma Armatürleri Güvenlik Deneyleri

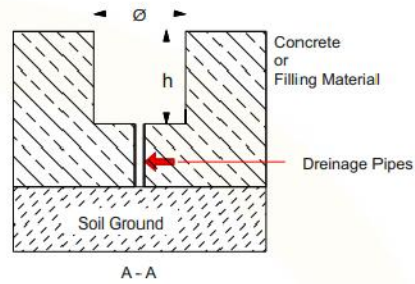
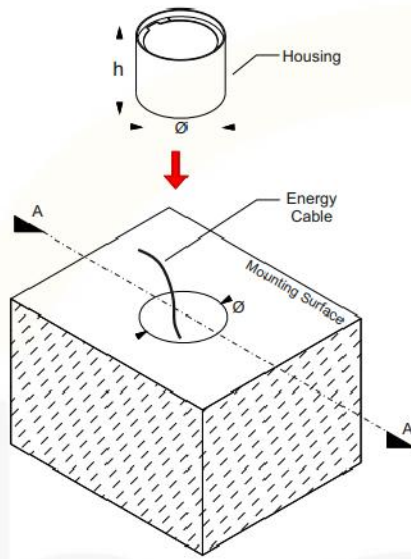
Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires



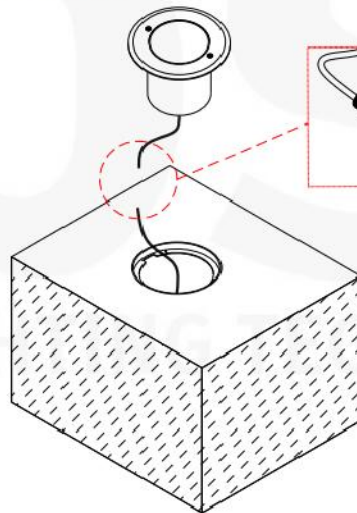
INOXI WALL INSTALLATION GUIDE

- 1) - Mounting hole is opens.
- Complete the drainage and place the housing.

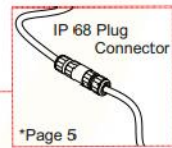
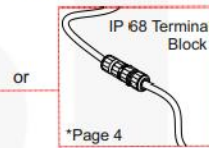
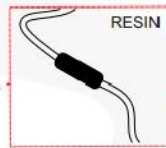


*** Mounting hole should be drained.

- 2) Electrical connection is done.



***The electrical connection must be under IP protection.
Otherwise, water may enter to the luminaire through cable
and damage the electronic parts inside.



When connecting the
luminaires, make sure that the
same color cables are
matching.

(+) Brown
(+) Yellow - Green
(-) Blue

*Please contact us for cables if in different colors.

DALI CONTROL CONNECTION

(+) Brown
(+) Green
(-) Grey
(DA) Yellow
(DA) White

*Please contact us for cables if in different colors.



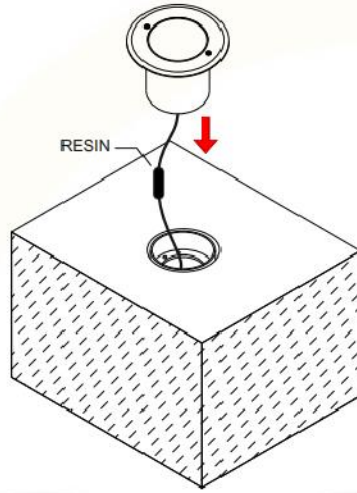
Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

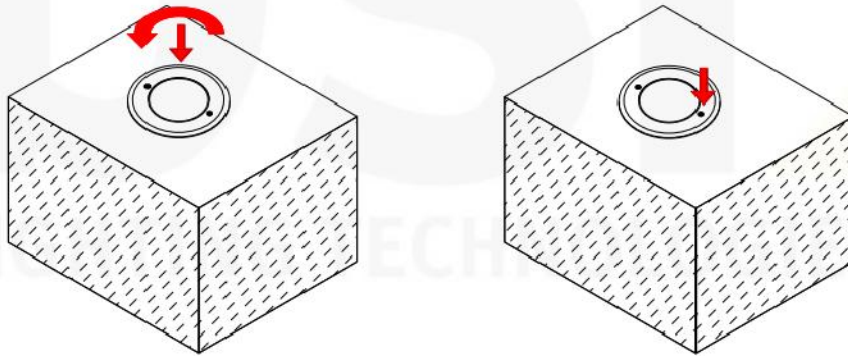


INOXI WALL INSTALLATION GUIDE

3) The luminaire is placed on the housing.



4) The luminaire is rotated like 30° and tightened the screws.



Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

		Ref. Certif. No. NO113639
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS DESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC		
CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC		
Product Produit Name and address of the applicant Nom et adresse du demandeur Name and address of the manufacturer Nom et adresse du fabricant Name and address of the factory Nom et adresse de l'usine Note: When more than one factory, please report on page 2 Note: Lorsque il y a plus d'une usine, veuillez utiliser la deuxième page Ratings and principal characteristics Valeurs nominales et caractéristiques principales Trademark (if any) Marque de fabrique (si elle existe) Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur Model / Type Ref. Ref. De type Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la deuxième page) A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport de tests numéro de référence qui constitue partie de ce Certificat This CB Test Certificate is issued by the National Certification Body Ce Certificat de test OC est établi par l'Organisme National de Certification	Electronic converter for LED Vossloh-Schwabe Deutschland GmbH Wasenstrasse 25 73660 Urbach Germany Vossloh-Schwabe Deutschland GmbH Wasenstrasse 25 73660 Urbach Germany ☒ Additional information on page 2 PRI: max. 0.32 A, 220-240 V~, 50/60 Hz, pf> 0.95 SEC: ECXe 500.479: 10-42 Vd.c. (under load), max. 52 Vd.c. (no-load), Irated: 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 mA, Prated: 6.3 / 8.4 / 10.5 / 12.6 / 14.7 / 16.8 / 18.9 / 21 W. ECXe 800.480: 28-40 Vd.c. (under load), max. 50 Vd.c. (no-load), Irated: 600 / 650 / 700 / 800 mA, Prated: 24 / 26 / 28 / 32 W. ECXe 1050.482: 28-40 Vd.c. (under load), max. 50 Vd.c. (no-load), Irated: 850 / 900 / 950 / 1050 mA, Prated: 34 / 36 / 38 / 42 W. Cl.II  ECXe 1050.482, ECXe 800.480, ECXe 500.479 ☒ Additional information on page 2 IEC 61347-1:2015, IEC 61347-1:2015/AMD1:2017 IEC 61347-2-13:2014, IEC 61347-2-13:2014/AMD1:2016 403492	
 Philip Pedersen vei 11, NO-1366 Lysaker, Norway Date: 18-08-2020 Signature: Jiyea Gim Certification Department		

Issued 2007-04

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Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

NICHIA STS-DA1-5639 <Cat.No.190423>

SPECIFICATIONS

(1) Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	I_F	1800	mA
Pulse Forward Current	I_{FP}	2400	mA
Allowable Reverse Current	I_R	85	mA
Power Dissipation	P_D	5.94	W
Operating Temperature	T_{opr}	-40~100	°C
Storage Temperature	T_{stg}	-40~100	°C
Junction Temperature	T_J	150	°C

* Absolute Maximum Ratings at $T_J=25^{\circ}\text{C}$.

* I_{FP} conditions with pulse width $\leq 10\text{ms}$ and duty cycle $\leq 10\%$.

* For I_F and I_{FP} , see the "DERATING CHARACTERISTICS" of this specification.

(2) Initial Electrical/Optical Characteristics

Item	Symbol	Condition	Typ	Max	Unit
Forward Voltage	V_F	$I_F=700\text{mA}$	2.96	-	V
		$I_F=350\text{mA}$	2.85	-	
R70	Luminous Flux (Chromaticity Coordinate1)	Φ_v	$I_F=700\text{mA}$	341	lm
			$I_F=350\text{mA}$	182	
	Luminous Intensity (Chromaticity Coordinate1)	I_v	$I_F=700\text{mA}$	101	cd
			$I_F=350\text{mA}$	54	
	Color Rendering Index (Chromaticity Coordinate1)	R_a	$I_F=700\text{mA}$	73	-
Chromaticity Coordinate1	x	-	$I_F=700\text{mA}$	0.3818	-
	y	-	$I_F=700\text{mA}$	0.3797	-
R70	Luminous Flux (Chromaticity Coordinate2)	Φ_v	$I_F=700\text{mA}$	346	lm
			$I_F=350\text{mA}$	184	
	Luminous Intensity (Chromaticity Coordinate2)	I_v	$I_F=700\text{mA}$	103	cd
			$I_F=350\text{mA}$	55	
	Color Rendering Index (Chromaticity Coordinate2)	R_a	$I_F=700\text{mA}$	73	-
Chromaticity Coordinate2	x	-	$I_F=700\text{mA}$	0.3447	-
	y	-	$I_F=700\text{mA}$	0.3553	-
Thermal Resistance	$R_{\theta JS}$	-	4.2	6.4	°C/W

* Characteristics at $T_J=25^{\circ}\text{C}$ and measured in pulse mode.

* Optical Characteristics as per CIE 127:2007 standard.

* Chromaticity Coordinates as per CIE 1931 Chromaticity Chart.

* $R_{\theta JS}$ is the thermal resistance from the junction to the T_J measurement point.

* $R_{\theta JS}$ is measured using the Dynamic Mode detailed in JESD51-1.

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

NICHA STS-DAL-5639 «Cat.No.190423»

RELIABILITY

(1) Tests and Results

Test	Reference Standard	Test Conditions	Test Duration	Failure Criteria #	Units Failed/Passed
Resistance to Soldering Heat (Reflow Soldering)	JEITA ED-4701 300 301	$T_{\text{ref}}=260^{\circ}\text{C}$, 10sec, 2reflows, Precondition: 30°C , 70%RH, 168hr		#1	0/22
Solderability (Reflow Soldering)	JEITA ED-4701 303 303A	$T_{\text{ref}}=245\pm 5^{\circ}\text{C}$, 5sec, Lead-free Solder (Sn-3.0Ag-0.5Cu)		#2	0/22
Thermal Shock (Air to Air)		-40°C to 100°C , 15min dwell	100cycles	#1	0/22
Moisture Resistance (Cyclic)	JEITA ED-4701 200 203	25°C ~ 65°C ~ -10°C , 90%RH, 24hr per cycle	10cycles	#1	0/22
High Temperature Storage	JEITA ED-4701 200 201	$T_A=100^{\circ}\text{C}$	1000hours	#1	0/22
Temperature Humidity Storage	JEITA ED-4701 100 103	$T_A=60^{\circ}\text{C}$, RH=90%	1000hours	#1	0/22
Low Temperature Storage	JEITA ED-4701 200 202	$T_A=-40^{\circ}\text{C}$	1000hours	#1	0/22
Room Temperature Operating Life		$T_A=25^{\circ}\text{C}$, $I_F=1000\text{mA}$ Test board: See NOTES below	1000hours	#1	0/22
High Temperature Operating Life		$T_A=100^{\circ}\text{C}$, $I_F=400\text{mA}$ Test board: See NOTES below	1000hours	#1	0/22
Temperature Humidity Operating Life		60°C , RH=90%, $I_F=700\text{mA}$ Test board: See NOTES below	500hours	#1	0/22
Low Temperature Operating Life		$T_A=-40^{\circ}\text{C}$, $I_F=700\text{mA}$ Test board: See NOTES below	1000hours	#1	0/22
Electrostatic Discharges	JEITA ED-4701 300 304	HBM, 2kV, 1.5k Ω , 100pF, 3pulses, alternately positive or negative		#1	0/22

NOTES:

- 1) Test board: FR4 board thickness=1.6mm, copper layer thickness=0.07mm, $R_{\text{amb}}=30^{\circ}\text{C}/\text{W}$
- 2) Measurements are performed after allowing the LEDs to return to room temperature.

(2) Failure Criteria

Criteria #	Items	Conditions	Failure Criteria
#1	Forward Voltage(V_F)	$I_F=700\text{mA}$	$>\text{Initial value}\times 1.1$
	Luminous Flux(Φ_v)	$I_F=700\text{mA}$	$<\text{Initial value}\times 0.7$
#2	Solderability	-	Less than 95% solder coverage

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

SERTİFİKA NO: RKSNI01

Certificate Nr:

UYGUNLUK BEYANI DECLARATION OF CONFORMITY

Üretici Adı ve adresi /Manufacturer



Elektrik Malzemeleri Sanayi ve Ticaret Ltd. Şti.
Fabrika(Factory): Kumpas Cad. No:20 Ö 1-3 Parsel
Tuzla/İSTANBUL/TURKEY

Ürün Grubu / Product Classification

Nikel Kaplı Pirinç Kablo Rakorları
Nickel Plated Brass Cable Glands

Ürün Tipi / Type Designation

REM, REK (Ürün kapsamı için Sayfa 2'ye bakınız)
REM, REK (Refer to addendum page 2 for product covered)

İlgili AT Direktifi /

The designated product meets the essential safety requirements of the EC-Directive

(2006/95/AT)

Belirli Gerilim Sınırları Dahilinde Kullanılmak Üzere Tasarlanmış
Elektrikli Teçhizat İle İlgili Yönetmelik (Ürün kapsamı için Sayfa 2'ye bakınız)

Adı geçen ürün serilerimizde bu hükümlerin yerine getirilmesinde aşağıda belirtilen standartlar kullanılmıştır; / The conformity with the provisions of this directive is proved by the compliance with the following standards;

EN 60079-0, EN 60079-1, EN 60079-7

CE işaretinin ilâştirildiği yıl: 13
fixing date of CE label



Bu beyanat REKSAN Ltd. Şti'nin yetkilisi Genel Müdür Müjgan ŞAHİN tarafından düzenlenmiştir.
This declaration is signed and issued by Müjgan ŞAHİN / Chairwoman

Teknik Dosya No:RKDT.01.01
Technical File Nr:

Genel Müdür / Chairwoman
Müjgan ŞAHİN
İstanbul - 20.09.2015

Rev. Nr: 01

Rev. Date: 20.09.2015

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Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

SERTİFİKA NO: RKSNI01
Certificate Nr:

Aşağıda ismi geçen ürünler (2006/95/AT) standardına göre üretilmiştir. / Products mentioned below are manufactured according to (2006/95/AT)

REK (Super Etanj) Serisi Rakorlar / REK (Super Etanj) Series Cable Glands

-REK.06.403 -REK.06.405 -REK.06.407 -REK.06.409 -REK.06.411 -REK.06.413 -REK.06.415
-REK.06.417 -REK.06.419 -REK.06.421 -REK.06.452 -REK.06.454 -REK.06.456 -REK.06.458
-REK.06.460 -REK.06.462 -REK.06.464 -REK.06.466 -REK.06.468 -REK.06.203 -REK.06.205
-REK.06.207 -REK.06.209 -REK.06.211 -REK.06.213 -REK.06.2014 -REK.06.215 -REK.06.217
-REK.06.219 -REK.06.221

REM (Waterproof) Serisi Rakorlar / REM (Waterproof) Series Cable Glands

-REM.06.076 -REM.06.077 -REM.06.078 -REM.06.078 -REM.06.079 -REM.06.080 -REM.06.081
-REM.06.086 -REM.06.082 -REM.06.083 -REM.06.084 -REM.06.085 -REM.06.085 -REM.06.087
-REM.06.088 -REM.06.089 -REM.06.090 -REM.06.091 -REM.06.092 -REM.06.103 -REM.06.104
-REM.06.105 -REM.06.106 -REM.06.107 -REM.06.108 -REM.06.109 -REM.06.110 -REM.06.111
-REM.06.115 -REM.06.116 -REM.06.117 -REM.06.127 -REM.06.112 -REM.06.125 -REM.06.126
-REM.06.129 -REM.06.113 -REM.06.114 -REM.06.126 -REM.06.130 -REM.06.140 -REM.06.141
-REM.06.115 -REM.06.116-

CE işaretinin ilâstirildiği yıl: 13
fixing date of CE label



Teknik Dosya No: RKDT.01.01
Technical File Nr:

Genel Müdür / General Manager
Müjgan ŞAHİN
İstanbul - 20.09.2015

Rev. Nr: 01 Rev. Date: 20.09.2015

Page 2/2



Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

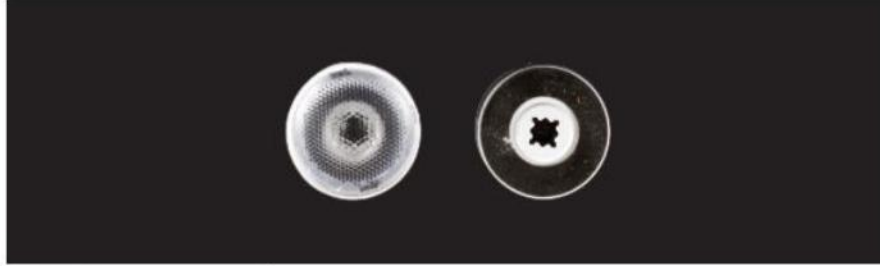
TLS01NI-D20-25-Tape

LED OPTIC DATASHEET

www.limbust.com.tr
444 27 33

LIMBUS
SINIRLI ŞİRKETİ

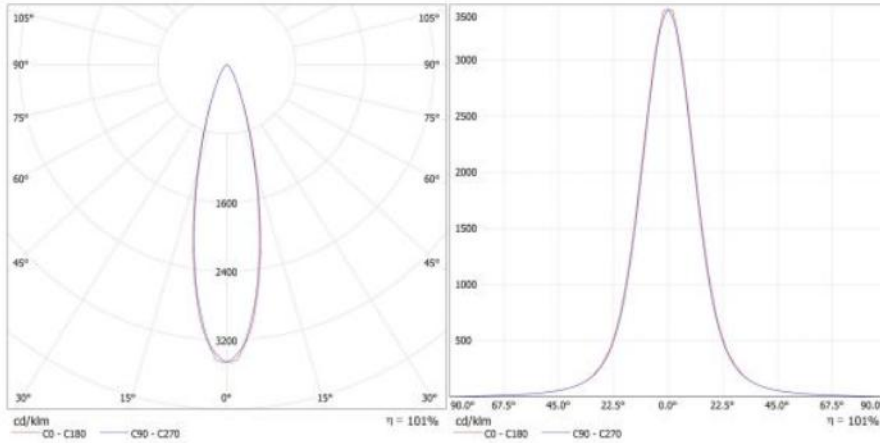
PRODUCT PICTURE



GENERAL SPECIFICATIONS

Product Code	TLS01NI-D20-25-Tape
Description	Flood Lighting
Degree (FWHM)	25°
Efficiency	90%
Size (mm) D x H	Ø 21.5 x H 11.5 mm
Material	Lens: PMMA Holder: PC
Fastening	Tape
Box Size (mm) WxLxH	630x260x300
Box Quantity	5000 pcs
Box Weight (g)	19000
Rohs Complaint	Yes
Operating Temperature	-40 ° C ~ + 90 ° C max
Storage Temperature	0 ° C ~ - 40 ° C max

PHOTOMETRIC SPECIFICATIONS



APPLICATION NOTES

- Direction for use**
- Please use some soft paper or pure water to clean lens (reflector)
 - Don't use any industrial solvent to clean lens surface , such as alcohol
 - Storage environment : Temperature 0°C ~ +40°C , Humidity 30% ~ 95%
 - This kind of lens can make the lighting more concentrated, and it's made from transparent material, so please do not open the packages until you use them, in case of the dust and other pollutions.

LIMBUS is registered trademark of TD Lighting Solutions.
www.tdteknoloji.com

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

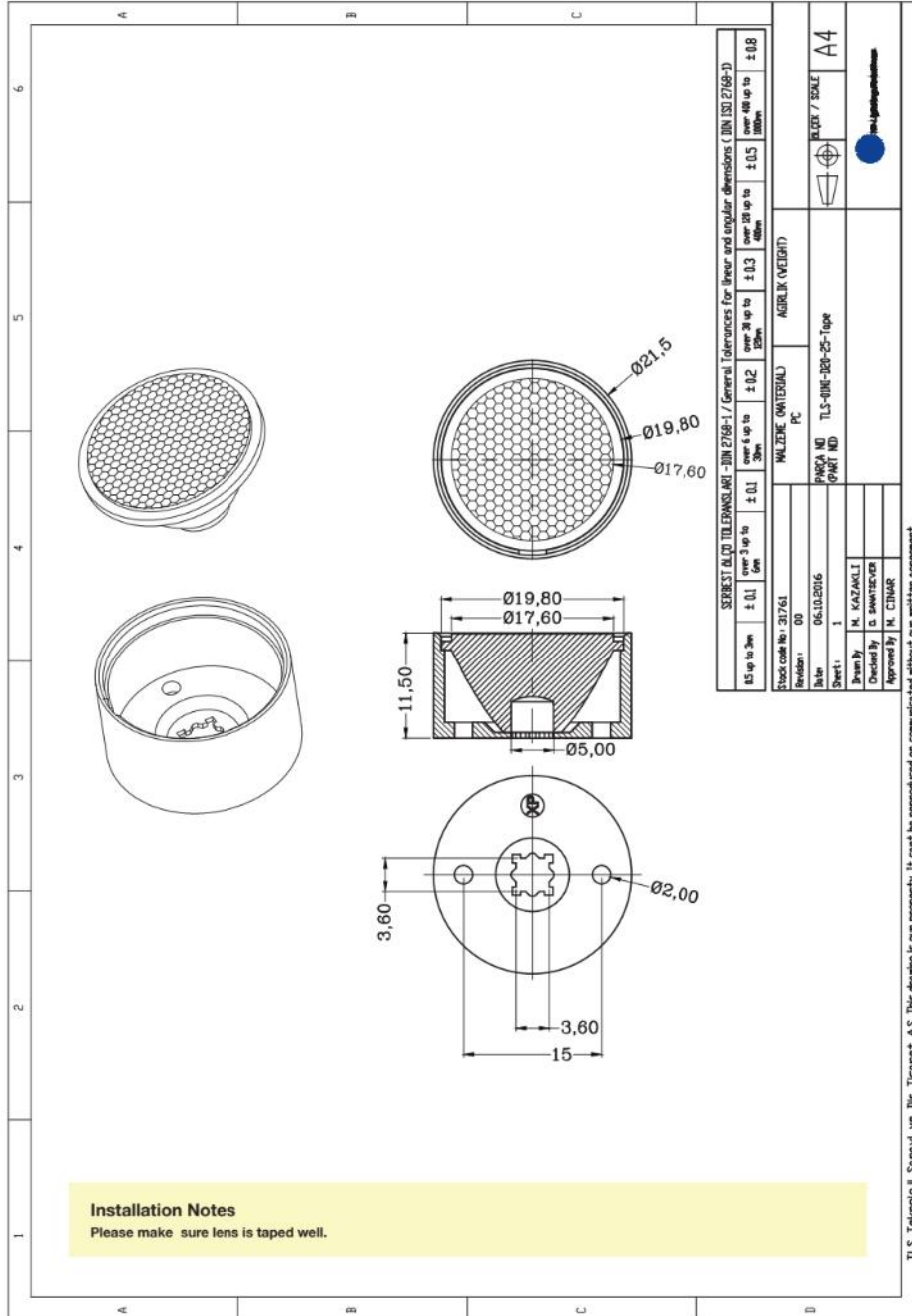
Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

TLS01NI-D20-25-Tape
LED OPTIC DATASHEET

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LIMBUS
CONTROL YOUR LIGHT

MECHANICAL DRAWINGS



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Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires

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Non-standard test method	N/A
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Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests Recessed luminaires and recessed air-handling luminaires



10/12/2024

BSI AYDINLATMA SAN. VE TİC. A.Ş.

AYNİYET BEYANI IDENTITY DECLARATION

AC81025 iNoxi L, AC81024 iNoxi M, AC81023 iNoxi S, AC81022 iNoxi XS, AC82022 iNoxi Nano model ürünlerin bütün teknik özelliklerinin (örn. tasarım, konstrüksüyon, özellikler, kritik komponentler) aynı olduğunu beyan ederiz.

We declare that the product(s) is (are) identical in all technical respects (e.g. design, construction, properties, critical components).

Model/Type Ref: AC81025 iNoxi L, AC81024 iNoxi M, AC81023 iNoxi S, AC81022 iNoxi XS, AC82022 iNoxi Nano

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