



Test Laboratuvarları

LVT Test Laboratuvarları Ltd. Şti.

www.lvt.com.tr

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AB-0341-T

23-1668-R0-N1-1

07-23

DENEY RAPORU

Test Report

1/51

Müşteri

Client

: BSI AYDINLATMA SAN. ve TİC. A.Ş.

Adres

Address

: BAŞKENT OSB, 20. CAD. B/3 BLOK NO:4 MALIKÖY,SİNCAN,ANKARA/TURKEY

İmalatçı

Manufacturer

: BSI AYDINLATMA SAN. ve TİC. A.Ş.

Teklif Numarası

Order No

: 23-1668-R0

Deney Numunesi

Test Sample

: DEKORATİF LED AYDINLATMA ARMATÜRÜ (MODEL: İLEVEL6074)

Marka

Trade Mark

: BSI

Deney Metodu

Test Method

: TS EN IEC 60598-2-1:2021

Deney Tarihi

Date of Test

: 09.06.2023 – 12.07.2023

Toplam Sayfa Sayısı

Total Number of Pages

: 51

Basım Tarihi

Date of Issue

: 20.07.2023

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

Mühür

Seal

Deney Sorumlusu

Person in Charge of Test

Bölüm Müdürü

Department Manager

Mustafa YETİŞEN

Ata Gürül ARSLANLI



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FRT.51/Rev08/0422

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1. **Numunelerin Tanımı** : DEKORATİF LED AYDINLATMA ARMATÜRÜ
Definition of the Samples : *Decorative LED Lighting Fixture*

1.1 DEKORATİF LED AYDINLATMA ARMATÜRÜ (MODEL: İLEVEL6074)

(23-1668-R0-N1)

Numune Kabul Tarihi <i>Receivnig Date</i>	:	07.06.2023
Numune Seri No <i>Serial No</i>	:	AR6074
Tip <i>Type</i>	:	İLEVEL6074
Kutup Sayısı <i>Number of Poles</i>	:	DC Luminare
Beyan Gerilimi <i>Rated Voltage</i>	U_n :	24 V _{DC}
Beyan Akımı <i>Rated Current</i>	I_n :	-
Beyan Güç <i>Rated Power</i>	P_n :	6 W
Beyan Frekans <i>Rated Frequency</i>	f_n :	DC Luminaire
Beyan Koruma Derecesi <i>Rated Degree of Protection</i>	IP :	67
Numune Boyutları <i>Dimensions of the Sample</i>	mm :	100 x 2
Numune Ağırlığı <i>Weight of the Sample</i>	kg :	0.040
Sınıf <i>Class</i>	:	III
Cihaz – Malzeme Listesi <i>Device – Component List</i>	:	Kritik Komponent Listesine Bakınız <i>See Critical Component List</i>

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(s) delivered to the laboratory by client.

Numune <i>Sample</i>	Uygulanan Deney <i>Applied Test</i>	Sonuç <i>Result</i>
DEKORATİF LED AYDINLATMA ARMATÜRÜ (MODEL: İLEVEL6074) <i>DECORATIVE LED LIGHTING FIXTURE (TYPE:İlevel6074)</i>	TS EN IEC 60598-2-1:2021	OLUMLU <i>PASSED</i>

3. **Çevre Şartları**
Environmental Conditions

3.1 **Ortam Sıcaklığı** : (20-30) °C
Ambient Temperature

3.2 **Ortam Nemi** : (30-60) %Rh
Ambient Moisture

4. **Deney Metodundan Sapma, Ekleme ve Çıkarmalar** : Deneyler; standart deney metoduna göre uygulanmıştır.
Deviations, Additions & Cutbacks from the Test Method : *Tests were made according to the clauses of the relevant standards.*

LVT Test Laboratuvarları Ltd. Şti.

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R0-N1-1

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- | | | | |
|----|---|---|--------------------------------------|
| 5. | Şartnamelere Uygunluk
(Gerekli Hallerde)
<i>Conformity to Specifications
(If Necessary)</i> | : | - |
| 6. | Dağıtım Bilgileri
<i>Distribution Information</i> | : | BSİ AYDINLATMA SAN. ve TİC. A.Ş. |
| 7. | Açıklama
<i>Explanation</i> | : | Tested using luminaire power supply. |
| 8. | Ölçüm Belirsizliği
<i>Uncertainty of Measurement</i> | : | - |
-



Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri Genel Amaçlı, Sabit Aydınlatma Armatürleri

*Luminaires Safety Tests
Fixed General Purpose Luminaires*

9. Deney Uygulamaları:

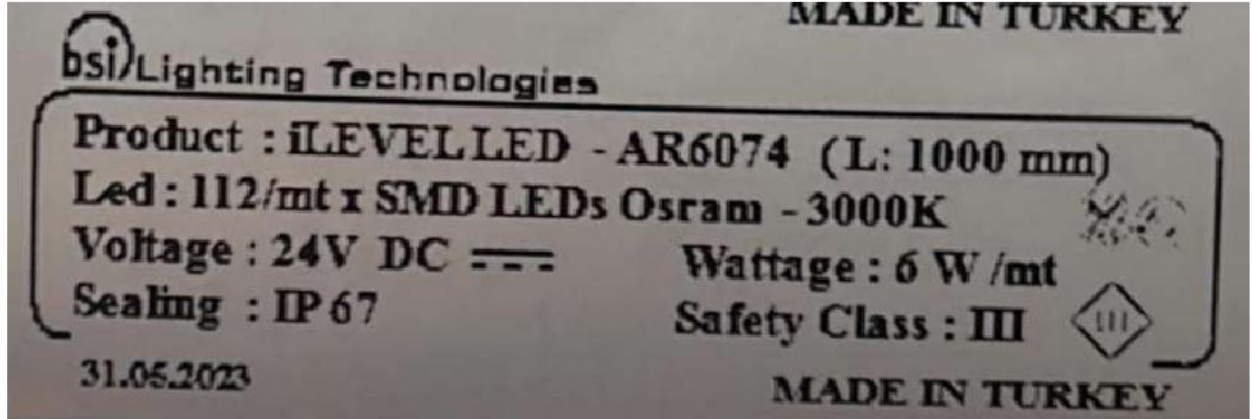
Test Applications

TEST REPORT IEC 60598-2-1 Luminaires Part 2: Particular requirements Section 1: Fixed general purpose luminaires
Test specification: Standard : IEC 60598-2-1:2020 used in conjunction with IEC 60598-1:2020 Test procedure : Type Test Non-standard test method : N/A
TRF template used : IEC EE OD-2020-F1:2020, Ed.1.3 Test Report Form No. : IEC60598_2_1H Test Report Form(s) Originator : Intertek Semko AB Master TRF : Dated 2021-05-21
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Aydınlatma Armatürleri Güvenlik Deneyleri Genel Amaçlı, Sabit Aydınlatma Armatürleri

*Luminaires Safety Tests
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Test item particulars	DECORATIVE LED LIGHTING FIXTURE (TYPE: iLEVEL6074)
Classification of installation and use	Class III.
Supply Connection.....	Non Detachable (The manufacturer does not provide the power supply.)
.....	:
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	: 07.06.2023
Date (s) of performance of tests.....	: 09.06.2023 – 12.07.2023
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 and other remarks: DECORATIVE LED LIGHTING FIXTURE (TYPE: iLEVEL6074)	





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Aydınlatma Armatürleri Güvenlik Deneyleri
Genel Amaçlı, Sabit Aydınlatma Armatürleri
Luminaires Safety Tests
Fixed General Purpose Luminaires

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

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.4 (0)	GENERAL TEST REQUIREMENTS		P
1.4 (0.3)	More sections applicable	Yes ☐ No ☒ Section/s:	—
1.4 (0.5)	Components	(see Annex 1)	—
1.4 (0.7)	Information for luminaire design in light sources standards		—
1.4 (0.7.2)	Light source safety standard		—
	Luminaire design in the light source safety standard		P
1.5 (2)	CLASSIFICATION OF LUMINAIRES		P
1.5 (2.2)	Type of protection	Class III luminaire.	P
1.5 (2.3)	Degree of protection	IP67	—
1.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....	Yes ☒ No ☐	—
1.5 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—
1.6 (3)	MARKING		P
1.6 (3.2)	Mandatory markings		P
	Position of the marking	Labels and markings are visible during and after assembly.	P
	Format of symbols/text	Symbols and markings conform to standard IEC 60598-1:2020.	P
1.6 (3.3)	Additional information	See below;	P
	Language of instructions	Turkish.	P
1.6 (3.3.1)	Combination luminaires	The luminaire is not combination luminaire.	N/A
1.6 (3.3.2)	Nominal frequency in Hz	DC luminaire.	N/A
1.6 (3.3.3)	Operating temperature	Not declared. (25 °C)	N/A
1.6 (3.3.5)	Wiring diagram	See assembly instruction.	P
1.6 (3.3.6)	Special conditions	No special conditions.	N/A
1.6 (3.3.7)	Metal halide lamp luminaire – warning	The luminaire does not have metal halide lamp. LED is used for lighting in the luminaire.	N/A
1.6 (3.3.8)	Limitation for semi-luminaires	The luminaire is not semi-luminaire.	N/A



Aydınlatma Armatürleri Güvenlik Deneyleri Genel Amaçlı, Sabit Aydınlatma Armatürleri

*Luminaires Safety Tests
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1.6 (3.3.9)	Power factor and supply current	0.86.	P
1.6 (3.3.10)	Suitability for use indoor		N/A
1.6 (3.3.11)	Luminaires with remote control	The luminaire does not have remotely controlgear.	N/A
1.6 (3.3.12)	Clip-mounted luminaire – warning	Not a clip-mounted luminaire.	N/A
1.6 (3.3.13)	Specifications of protective shields	There is no protective shield.	N/A
1.6 (3.3.14)	Symbol for nature of supply	 See label.	P
1.6 (3.3.15)	Rated current of socket outlet	The luminaire does not have socket outlet.	N/A
1.6 (3.3.16)	Rough service luminaire	The luminaire is not intended for rough service.	N/A
1.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		P
1.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
1.6 (3.3.19)	Protective conductor current in instruction if applicable	The luminaire is Class III.	N/A
1.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach	Luminaire is not wall mounted, settable or adjustable.	N/A
1.6 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		N/A
1.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
1.6 (3.3.23)	Luminaires without control gear provided with necessary information for selection of appropriate component	The luminaire is powered by a DC power supply. This power supply is not included in the system.	N/A
1.6 (3.3.24)	If not supplied with terminal block, information on the packaging	The supply of the luminaire is provided by the connectors provided by the manufacturer.	N/A
1.6 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided	No employing light sources that emit UV.	N/A
1.6 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		N/A
1.6 (3.4)	Test with water	Tried to remove the marking by rubbing lightly for 15 s with a piece of cloth soaked with water. The label is reinforced with the help of a tape.	P
	Test with hexane	The marking was rubbed with Petroleum Ether for another 15 seconds using a cloth. The label is reinforced with the help of a tape.	P
	Legible after test	The label can be read after test.	P



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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

	Label attached	Label is firmly attached.	P
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1.7 (4)	CONSTRUCTION		P
1.7 (4.2)	Components replaceable without difficulty	Luminaires incorporating components or parts intended to be replaceable are so designed that there is sufficient space to permit replacement of such components or parts without difficulty and without impairing safety.	P
1.7 (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 is not protrude into wireways.	P
1.7 (4.4)	Lamp holders		N/A
1.7 (4.4.1)	Integral lamp holder	The luminaire does not have integral lamp holder.	N/A
1.7 (4.4.2)	Wiring connection	The luminaire does not have integral lamp holder.	N/A
1.7 (4.4.3)	Lamp holder for end-to-end mounting	No tubular fluorescent lamps.	N/A
1.7 (4.4.4)	Positioning	The luminaire does not have lampholder.	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 show no permanent deformation		N/A
	- bending test (N)		—
	After test the lamp holder has not moved from its position and show no permanent deformation		N/A
1.7 (4.4.5)	Peak pulse voltage	The luminaire does not have ignitor.	N/A
1.7 (4.4.6)	Centre contact	The luminaire is not luminaire with ignitors incorporating Edison screw lampholders.	N/A
1.7 (4.4.7)	Parts in rough service luminaires resistant to tracking	The luminaire is not intended for rough service.	N/A
1.7 (4.4.8)	Lamp connectors		N/A
1.7 (4.4.9)	Caps and bases correctly used		N/A





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*Luminaires Safety Tests
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1.7 (4.4.10)	Light source for lamp holder or connection according IEC 60061 not connected another way	No such part.	N/A
1.7 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II	The luminaire does not have starter holder.	N/A
	Starter holder class II construction		N/A
1.7 (4.6)	Terminal blocks		N/A
	Tails	No separate terminal block is required for connection to fixed wiring. The connections in the luminaire are provided as made.	N/A
	Unsecured blocks		N/A
1.7 (4.7)	Terminals and supply connections		N/A
1.7 (4.7.1)	Contact to metal parts	The luminaire is not portable luminaire of class I or II or in fixed luminaire of class I or II that are frequently adjusted.	N/A
1.7 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
1.7 (4.7.3)	Terminals for supply conductors		N/A
1.7 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding	No welding is used for connection of connectors.	N/A
	- welding between wires		N/A
	- Type Z attachment	Not 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
1.7 (4.7.4)	Terminals other than supply connection	No such terminal.	N/A
1.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
1.7 (4.7.6)	Multi-pole plug	There is no multi-pole plug.	N/A
	- test at 30 N		N/A
1.7 (4.8)	Switches		N/A
	- adequate rating	The luminaire does not have switch.	N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A





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*Luminaires Safety Tests
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1.7 (4.9)	Insulating lining and sleeves		N/A
1.7 (4.9.1)	Retainment	Insulating lining or sleeve is not used in the luminaire. The lining of the cable was deemed sufficient.	N/A
	Method of fixing		N/A
1.7 (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
1.7 (4.10)	Double or reinforced insulation		N/A
1.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation	Class III luminaire.	N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
1.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental	Class III luminaire.	N/A
	- no straight access with test probe		N/A
1.7 (4.10.3)	Retainment of insulation:		N/A
	- fixed	Class III luminaire.	N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lamp holder		N/A
1.7 (4.10.4)	Protective impedance device		N/A
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor	The luminair does not have protective impedance device.	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
1.7 (4.11)	Electrical connections and current-carrying parts		N/A
1.7 (4.11.1)	Contact pressure		N/A
1.7 (4.11.2)	Screws:		N/A
	- self-tapping screws	Screws are not used in current-carrying parts.	N/A
	- thread-cutting screws		N/A



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Luminaires Safety Tests
Fixed General Purpose Luminaires

1.7 (4.11.3)	Screw locking:		N/A
	- spring washer	The luminaire does not have spring washer	N/A
	- rivets	No rivet.	N/A
1.7 (4.11.4)	Material of current-carrying parts		P
1.7 (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
1.7 (4.11.6)	Electro-mechanical contact systems	The luminaire does not have electro-mechanical contact system.	N/A
1.7 (4.12)	Screws and connections (mechanical) and glands		N/A
1.7 (4.12.1)	Screws not made of soft metal		N/A
	Screws of insulating material		N/A
	Torque test: torque (Nm); part		N/A
	Torque test: torque (Nm); part		N/A
	Torque test: torque (Nm); part		N/A
1.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
1.7 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm).....		N/A
	- lamp holder; torque (Nm)	The luminaire does not have lamp holder.	N/A
	- push-button switches; torque 0,8 Nm.....	The luminaire does not have push-button switch.	N/A
1.7 (4.12.5)	Screwed glands; force (Nm)		N/A
1.7 (4.13)	Mechanical strength		P
1.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....	0.2 J	N/A
	- other parts; energy (Nm)	0.35 J.	P
	1) live parts	The luminaire does not have live part.	N/A
	2) linings	The effectiveness of the insulation is not impaired.	P
	3) protection	The sample continues to provide protection against moisture ingress and IP rating in accordance with its classification.	P
	4) covers	The luminaire does not have cover.	N/A



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1.7 (4.13.2)	Metal parts have adequate mechanical strength	The luminaire does not have live part. The metal parts used have sufficient mechanical strength.	N/A
1.7 (4.13.3)	Straight test finger	The luminaire does not have live part.	N/A
1.7 (4.13.4)	Rough service luminaires		N/A
	- 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
1.7 (4.13.6)	Tumbling barrel	The luminaire does not have a Plug-in independent control device and is not connected to the mains socket outlet.	N/A
1.7 (4.14)	Suspensions, fixings and means of adjusting		P
1.7 (4.14.1)	Mechanical load:		P
	A) four times the weight	0.4 kg.	P
	B) torque 2,5 Nm	The luminaire is not rigid suspension luminaire.	N/A
	C) bracket arm; bending moment (Nm)	The luminaire is not rigid suspension bracket.	N/A
	D) load track-mounted luminaires	The luminaire is not track-mounted luminaire.	N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)	The luminaire is not clip-mounted luminaire.	N/A
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
1.7 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)	The luminaire does not suspended with flexible cables or cords.	—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
1.7 (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





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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

	- electric strength test afterwards		N/A
1.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors	The luminaire does not have telescopic tube.	N/A
1.7 (4.14.5)	Guide pulleys	No guide pulley.	N/A
1.7 (4.14.6)	Strain on socket-outlets		N/A
1.7 (4.15)	Flammable materials		N/A
	- glow-wire test 650°C	See Test Table 1.15 (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
1.7 (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
1.7 (4.16)	Luminaires for mounting on normally flammable surfaces		N/A
	No lamp control gear	(compliance with Section 12) The luminaire is suitable for mounting on flammable surfaces. The luminaire is supplied as 24V _{DC} , has low power and does not reach extreme temperatures. The luminaire does not have control gear.	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
1.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
1.7 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
1.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
1.7 (4.17)	Drain holes		N/A





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Luminaires Safety Tests
Fixed General Purpose Luminaires

	Clearance at least 5 mm	The luminaire does not have drain hole.	N/A
1.7 (4.18)	Resistance to corrosion		N/A
1.7 (4.18.1)	- rust-resistance		N/A
1.7 (4.18.2)	- season cracking in copper		N/A
1.7 (4.18.3)	- corrosion of aluminium		N/A
1.7 (4.19)	Igniters compatible with ballast	The luminaire does not have ignitor.	N/A
1.7 (4.20)	Rough service vibration	The luminaire is not rough service luminaire.	N/A
1.7 (4.21)	Protective shield		N/A
1.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps	The luminaire does not have protective shield.	N/A
	Shield of glass if tungsten halogen lamps		N/A
1.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
1.7 (4.21.3)	No direct path		N/A
1.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment	See Test Table 1.15 (13.3.2)	N/A
1.7 (4.22)	Attachments to lamps not cause overheating or damage	The luminaire does not have any attachments.	N/A
1.7 (4.23)	Semi-luminaires comply Class II		N/A
*1.7 (4.24)	Photobiological hazards		*N/A
*1.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		*N/A
*1.7 (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

* Deney/Deneyler akreditasyon kapsamı dahilinde değildir.

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





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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

1.7 (4.25)	Mechanical hazard		P
	No sharp point or edges	Luminaire is no sharp points or edges that could, during installation, normal use, or maintenance, create a hazard for the user.	P
1.7 (4.26)	Short-circuit protection		N/A
1.7 (4.26.1)	Adequate means of uninsulated accessible SELV / PELV parts	The luminaire does not have uninsulated accessible SELV or PELV parts.	N/A
1.7 (4.26.2)	Short-circuit test with test chain according 4.26.3:		N/A
	Supply source ES1 PSE		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
1.7 (4.27)	Terminal blocks with integrated screwless protective earthing contacts		N/A
	Test according Annex V	The luminaire is Class III luminaire. The luminaire does not have protective earth.	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
1.7 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type	The luminaire does not have thermal sensing control.	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
1.7 (4.29)	Luminaires with non-replaceable light source		N/A
	Not possible to replace light source	The luminaire does not have live part.	N/A
	Live part not accessible after parts have been opened by hand or tools		N/A

* Deney/Deneyler akreditasyon kapsamı dahilinde değildir.

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





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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

1.7 (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
	At least one fixing means requiring use of tool	No such light source.	N/A
1.7 (4.31)	Insulation between circuits		N/A
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	The luminaire does not have controlgear or transformers.	N/A
	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		N/A
1.7 (4.31.1)	SELV or PELV circuits		N/A
	Used SELV/PELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of SELV/PELV circuits from LV supply		N/A
	Insulating of SELV/PELV circuits from other non SELV/PELV circuits		N/A
	Insulating of SELV/PELV circuits from FELV		N/A
	Insulating of SELV/PELV circuits from other SELV/PELV circuits		N/A
	SELV/PELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
1.7 (4.31.2)	FELV circuits		N/A
	Used FELV source		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 with 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
1.7 (4.31.3)	Other circuits		N/A



Aydınlatma Armatürleri Güvenlik Deneyleri Genel Amaçlı, Sabit Aydınlatma Armatürleri

*Luminaires Safety Tests
Fixed General Purpose Luminaires*

	Other circuits insulated from accessible parts according Table X.1		N/A
	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
	- 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
1.7 (4.32)	Overvoltage protective devices		N/A
	Comply with IEC 61643-11	The luminaire does not have overvoltage protective device.	N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
1.6 (4.33)	Luminaire powered via information technology communication cabling		N/A
	Requirements for Class III luminaire		N/A
	Rated voltage within the range of ES1 and does not exceed maximum voltage of used connector		N/A
	Luminaire does not create any hazard from overvoltage	(see Annex-2)	N/A
1.6 (4.34)	Electromagnetic fields (EMF)		N/A
	No harmful electromagnetic fields		N/A
1.6 (4.35)	Protection against moving fan blades		N/A
	Test with a standard test finger	The luminaire does not have fan blade.	N/A
	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire		N/A
	Blades rounded with radius ≥ 0.5 mm and:		N/A
	-hardness less than D60 Shore		N/A
	-peripheral speed less than 15 m/s		N/A
	-input power of fan ≤ 2 W at rated voltage		N/A
1.6 (4.36)	Track-mounted luminaires		N/A
	Test in accordance with Annex A of IEC60570:2003/AMD2:2019	The luminaire is not track-mounted.	N/A

1.8 (11)	CREEPAGE DISTANCES AND CLEARANCES		N/A
1.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☐ Category III ☐	—
	Category III according Annex U	No values are specified for working voltages below 25 V RMS and 60 V _{DC} as the test voltage of Table 10.2 is considered sufficient. The luminaire supply voltage is 24 V _{DC} .	N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
1.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	N/A
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 1.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	N/A
1.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	N/A
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 1.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	N/A

1.9 (7)	PROVISION FOR EARTHING		N/A
1.9 (7.2.1 + 7.2.3)	Accessible metal parts	The luminaire does not have earth. The luminaire is Class III luminaire.	N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω		N/A
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Protective earth makes contact first		N/A
	Terminal blocks with integrated screwless protective earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
1.9 (7.2.2 + 7.2.3)	Protective earth continuity in joints, etc.		N/A
1.9 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A



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1.9 (7.2.5)	Protective earth terminal integral part of connector socket		N/A
1.9 (7.2.6)	Protective earth terminal adjacent to mains terminals		N/A
1.9 (7.2.7)	Electrolytic corrosion of the protective earth terminal		N/A
1.9 (7.2.8)	Material of protective earth terminal		N/A
	Contact surface bare metal		N/A
1.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
1.9 (7.2.11)	Protective earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
1.9 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

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

1.10 (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

1.11 (5)	EXTERNAL AND INTERNAL WIRING		P
1.11 (5.2)	Supply connection and external wiring		N/A
1.11 (5.2.1)	Means of connection.....		N/A
	Outdoor luminaire has not PVC insulated external wiring if not Class III or SELV/PELV circuits ≤ 25 V AC/60 V DC/25 V peak interrupted DC voltage with frequency 10Hz -200 Hz or protected from outdoor environment	The luminaire is Class III luminaire.	N/A
1.11 (5.2.2)	Type of cable		N/A
	Nominal cross-sectional area (mm ²).....		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
1.11 (5.2.3)	Type of attachment, X, Y or Z		N/A
1.11 (5.2.5)	Type Z not connected to screws		N/A
1.11 (5.2.6)	Cable entries:		N/A
	- suitable for introduction		N/A
	- adequate degree of protection		N/A





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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

1.11 (5.2.7)	Cable entries through rigid material have rounded edges		N/A
1.11 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed	The luminaire does not have insulating bushing.	N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
1.11 (5.2.9)	Locking of screwed bushings	No such part.	N/A
1.11 (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
1.11 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed	The luminaire does not have cord anchorage.	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
1.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	The luminaire does not have cord anchorage.	N/A
1.11 (5.2.10.3)	Tests:		N/A
	- 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





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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

	- function independent of electrical connection		N/A
1.11 (5.2.10.4)	Luminaire with/ designed for use with supply cord with maximum current of 2A:		N/A
	- Ordinary Class III luminaire supplied with SELV $\leq 25V$ RMS/60V DC	The luminaire is not ordinary luminaire. Because IP66 protection.	N/A
	- Ordinary Class III luminaire supplied with PELV $\leq 12V$ RMS/30V DC		N/A
	- Other than ordinary Class III luminaire supplied with voltage $\leq 12V$ RMS/30V DC		N/A
	Pull test of 30N		N/A
1.11 (5.2.11)	External wiring passing into luminaire		N/A
1.11 (5.2.12)	Looping-in terminals		N/A
1.11 (5.2.13)	Wire ends not tinned	The luminaire does not have cold flow.	N/A
	Wire ends tinned: no cold flow		N/A
1.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
1.11 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
1.11 (5.2.16)	Appliance inlets (IEC 60320)	No appliance inlets.	N/A
	Installation couplers (IEC 61535)		N/A
	Appliance inlet or connector systems (IEC 61984)		N/A
1.11 (5.2.17)	No standardized interconnecting cables properly assembled		P
1.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083	The luminaire does not have plug.	N/A
	- other standard		N/A
1.11 (5.3)	Internal wiring		P





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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

1.11 (5.3.1)	Internal wiring of suitable size and type	Internal wiring is made with conductors of a suitable size and type to handle the power occurring during normal use. The insulation of the wiring is made of a material capable of withstanding the voltage and the maximum temperature to which it is subjected, without affecting the safety when properly installed and connected to the mains.	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 protective earth only	The luminaire does not have earth.	N/A
1.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm ²)		N/A
	Insulation thickness (mm)		N/A
	Extra insulation added where necessary		N/A
1.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm ²)	No such part.	N/A
1.11 (5.3.1.3)	Double or reinforced insulation for class II	The luminaire is Class III.	N/A
1.11 (5.3.1.4)	Conductors without insulation	The luminaire does not have non insulated conductor.	N/A
1.11 (5.3.1.5)	SELV/PELV current-carrying parts		N/A
1.11 (5.3.1.6)	Insulation thickness other than PVC or rubber	The cable used is PVC.	N/A



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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

1.11 (5.3.2)	Sharp edges etc.	Internal wiring is so situated or protected that it cannot be damaged by sharp edges, rivets, screws and similar components, or by moving parts of switches, joints, raising and lowering devices, telescopic tubes and similar parts. Wiring is not twisted along the longitudinal axis of the cable through an angle exceeding 360°.	P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.	No such part.	N/A
	No twisting over 360°		N/A
1.11 (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
1.11 (5.3.4)	Joints and junctions effectively insulated		N/A
1.11 (5.3.5)	Strain on internal wiring		N/A
1.11 (5.3.6)	Wire carriers		N/A
1.11 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
1.11 (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) The luminaire does not have conductors having a reduced cross-sectional area.	N/A
	No damage to luminaire wiring after test		N/A



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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

1.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK		N/A
1.12 (8.2.1)	Live parts not accessible	The luminaire does not have live part. The luminaire supply voltage is 24 V _{DC} .	N/A
	Basic insulated parts not used on the outer surface without appropriate protection		N/A
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	The luminaire is fixed and not adjustable.	N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		N/A
	Lamp and starter holders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		N/A
	Double-ended tungsten filament lamp	No tungsten filament lamp.	N/A
	Insulation lacquer not reliable		N/A
	Double-ended high-pressure discharge lamp	No such lamp.	N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
1.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position	The luminaire is fixed luminaire.	N/A
1.12 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement	Class III 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
1.12 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be connected to protective earth	No such part.	N/A
1.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)	The luminaire is not ordinary luminaire.	N/A
	- voltage under load/ no-load DC (V)		N/A
	- interrupted DC voltage (V)		N/A
	- touch current if applicable (mA)		N/A
	One conductive part insulated if required		N/A





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*Luminaires Safety Tests
Fixed General Purpose Luminaires*

	Other than ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V).....:		N/A
	- voltage under load/ no-load DC (V).....:		N/A
	- interrupted DC 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
1.12 (8.2.3.d)	PELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V).....:	No PELV circuit.	N/A
	- voltage under load/ no-load DC (V).....:		N/A
	Other than ordinary luminaire:		
	- voltage under load/ no-load AC (V).....:		N/A
	- voltage under load/ no-load DC (V).....:		N/A
	One pole insulated if required		N/A
1.12 (8.2.4)	Portable luminaire has protection independent of supporting surface	The luminaire is fixed.	N/A
1.12 (8.2.5)	Compliance with the standard test finger or relevant probe		N/A
1.12 (8.2.6)	Covers reliably secured		N/A
1.12 (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

1.13 (12)	ENDURANCE TEST AND THERMAL TEST		P
1.13 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) as specified in 1.14		—
1.13 (12.2)	Selection of lamps and ballasts		—
	Lamp used according Annex B	(Lamp used see Annex 2) LED. See documentation of client.	—
	Control gear if separate and not supplied	(Control gear used see Annex 2) The luminaire does not have controlgear.	—
1.13 (12.3)	Endurance test		P





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	a) mounting-position	Working position.	—
	b) test temperature (°C)	35±2 °C	—
	c) total duration (h)	240 h	—
	d) supply voltage (V)	24 x 1.1 = 26.4 V _{DC}	—
	d) if not equipped with control gear, constant voltage/current (V) or (A)		—
1.13 (12.3.1d)	d) Class III luminaires powered via information technology communication cable:		N/A
	- voltage under normal operation (V)		—
	- voltage under abnormal operation (V)		—
	e) luminaire ceases to operate	The luminaire was not stop operate.	—
	f) luminaire with constant light output function		N/A
1.13 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system	The luminaire does not have track system.	N/A
	- marking legible		P
	- no cracks, deformation etc.		P
1.13 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
1.13 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
1.13 (12.6)	Thermal test (failed lamp control gear condition):		N/A
1.13 (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
1.13 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions	The luminaire does not have external thermal sensing control.	—
	- thermal link		N/A
	- manual reset cut-out		N/A





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	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
1.13 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
1.13 (12.7.1)	Luminaire without temperature sensing control		N/A
1.13 (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
	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 1.15 (13.2.1)	N/A
1.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions.....	The luminaire does not have fluorescent lamp.	—
	- 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 1.15 (13.2.1)	N/A
1.13 (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
1.13 (12.7.2)	Luminaire with temperature sensing control		N/A





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	- 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 1.15 (13.2.1)		N/A

1.14 (9)	RESISTANCE TO DUST AND MOISTURE		P
1.14 (-)	If IP > IP 20 the order of tests as specified in clause 1.12		N/A
1.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		N/A
	- classification according to IP	20	—
	- mounting position during test.....	Normal use.	—
	- fixing screws tightened; torque (Nm).....		—
	- tests according to clauses	IP20 protection.	—
	- electric strength test afterwards	IP20	N/A
	a) no deposit in dust-proof luminaire	IP20	N/A
	b) no talcum in dust-tight luminaire	IP20	N/A
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard	IP20	N/A
	c.1) For luminaires without drain holes – no water entry	IP20	N/A
	c.2) For luminaires with drain holes – no hazardous water entry	The luminaire does not have drain hole.	N/A
	d) no water in watertight, pressure watertight, high pressure and temperature water jet-proof or high pressure and cold water jet-proof luminaire	IP20	N/A
	e) no contact with live parts (IP 2X)	IP20	P
	e) no entry into enclosure (IP 3X and IP 4X)	IP20	N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)	IP20	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		N/A
1.14 (9.3)	Humidity test 48 h	%93 Rh – 25 °C.	P





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1.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
1.15 (10.2.1)	Insulation resistance test	The insulation resistance is measured with a DC voltage of approximately 100 V, 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	Covered by metal foil, test voltage is applied for 1 minute.	—
	Insulation resistance (MΩ):		P
	SELV/PELV:		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface	100V, 20 GΩ	P
	- between current-carrying parts and metal parts of the luminaire	The luminaire does not have metal part.	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 bushing.	N/A
	Other than SELV/PELV:		N/A
	- between live parts of different polarity	The luminaire does not have other than SELV/PELV part.	N/A
	- between live parts and mounting surface		N/A
	- between live parts and metal parts		N/A
	- 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 bushing.	N/A
1.15 (10.2.2)	Electric strength test		P
	Dummy lamp	No 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):		P
	SELV/PELV:		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface	500V applied.	P





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	- between current-carrying parts and metal parts of the luminaire	The luminaire does not have metal part.	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
	Other than SELV/PELV:		N/A
	- between live parts of different polarity	The luminaire does not have other than SELV/PELV part.	N/A
	- between live parts and mounting surface		N/A
	- between live parts and metal parts		N/A
	- between live parts of different polarity through action of a switch	The luminaire does not have 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		N/A
1.15 (10.3)	Touch current (mA).....	Max touch current<0.3 mA	P
	Protective conductor current (mA).....	Protective conductor current<3.5 mA	P

1.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		N/A
1.16 (13.2.1)	Ball-pressure test 13.2.1	See Test Table 1.16 (13.2.1)	N/A
1.16 (13.3.1)	Needle-flame test (10 s)	See Test Table 1.16 (13.3.1)	N/A
1.16 (13.3.2)	Glow-wire test (650°C).....	See Test Table 1.16 (13.3.2)	N/A
1.16 (13.4)	Proof tracking test (IEC 60112)	See Test Table 1.16 (13.4)	N/A





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1.8 (11.2)	TABLE I: Creepage distances and clearances						N/A
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						N/A
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						N/A
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:							
Working voltage (V)						—	
PTI					< 600 ☐	≥ 600 ☐	—
Pulse voltage or U_P if applicable (kV)						—	
Supplementary information:							
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: No values are specified for working voltages below 25 V RMS and 60 V DC as the test voltage of Table 10.2 is considered sufficient. The luminaire supply voltage is 24 V _{DC} .							

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



1.8 (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 between lamp holder terminals.							
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. See also IEC 60598-1 Annex M.

1.16 (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:				



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1.16 (13.3.1)	TABLE: Needle-flame test					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:						

1.16 (13.3.2)	TABLE: Resistance to heat and fire - Glow wire tests						N/A
Object/ Part No./ Material	Manufacturer/ trademark	Glow wire test (°C)					Verdict
		650		750		850	
		te	ti	te	ti		
Ignition of the specified layer placed underneath the test specimen (Yes/No)							
Supplementary information:							

1.16 (13.4)	TABLE: Proof tracking test					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:						





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ANNEX 1		TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Cable	C	HANOĞLU	H05VVH2-F	-	TS EN 50525-2- 11:2011, TS EN 50525-2-31	Declared	
LED	C	Shenzhen CTL	GYD-02	IP68, Transparent	TS EN IEC 60598-2-1:2021	Test in appliance	

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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ANNEX 2	TABLE: Thermal tests of Section 12			P			
	Type reference.....:		—				
	Lamp used	LED	—				
	Lamp control gear used	The test used DC power supply.	—				
	Mounting position of luminaire	Normal use.	—				
	Supply wattage (W)		—				
	Supply current (A)		—				
	Temperatures in test 1 - 4 below are corrected for ta (°C)		—				
	- abnormal operating mode		—				
1.13 (12.4)	- test 1: rated voltage	24 V _{DC}	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	25.44 V _{DC}	—				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....	The luminaire does not have socket-outlet.	—				
	Through wiring or looping-in wiring loaded by a current of A during the test		—				
1.13 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current or 130/150% of rated input voltage.....		—				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Power Supply	24.2 – 26.9	49.6	51.8	-	90	-	-
Led Metal Housing	24.2 – 26.9	36.5	38.3	-	90	-	-
Led Enclosure	24.2 – 26.9	37.7	39.4	-	90	-	-
Led Connection Socket	24.2 – 26.9	30.5	32.6	-	90		
Power Cable	24.2 – 26.9	28.1	28.2	-	90		
Supplementary information:							



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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





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(15.3.6)	Clear connection method		N/A
(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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(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:											





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Luminaries Safety Tests
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10. Deney ve Ölçüm Bilgileri:

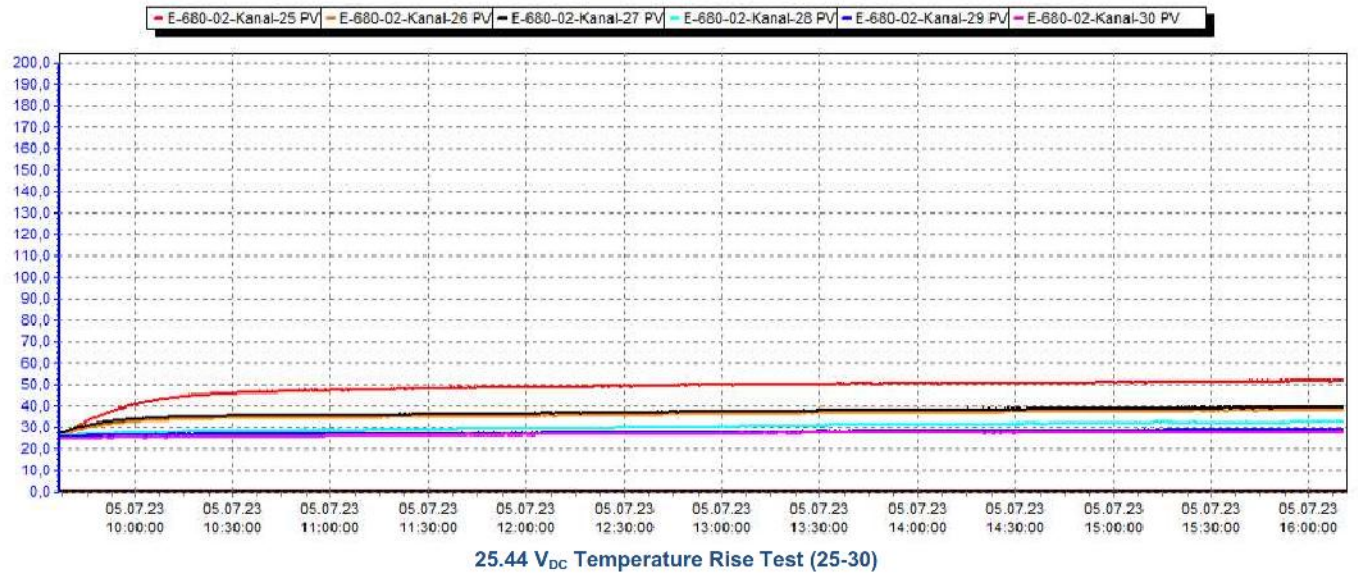
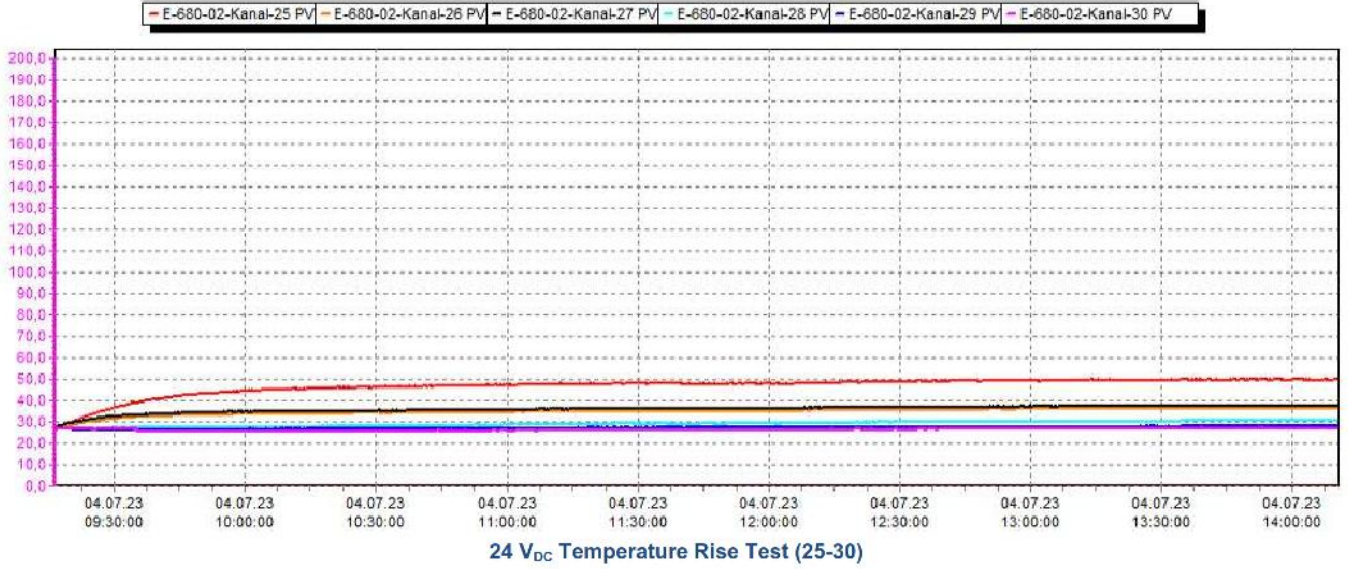
Test and Measuring Arrangement

Cihaz Device	İmalatçı Manufacturer	Seri No. / Kod Serial No / Code	Sertifika No Certificate No	Kalibrasyon Tarihi Calibration Date
Humidity Temperature Meter	CEM	LC349	S2200681	May/2024
Temperature Rise Data Logger	ELİMKO	LC63	109102	May/2024
Humidity Cabinet	LVT	LC215	22/1479	June/2024
Dielectric Test Equipment	REK	LC482	2202495	May/2024
Oscilloscope	RIGOL	LC30	2201531	March/2024
Touch Current Simulator	CSK	LC88	146402	October/2023
Multimeter	FLUKE	LC1	E2207722	October/2023
Spring Hammer (0,35J)	-	LC219	63402	April/2024
Spring Hammer (0,2J)	-	LC218	63405	April/2024
Digital Scales	TEM STAR	LC480	141101	July/2024
Insulation resistance tests	WUHAN	LC475	2201008	February/2024
Perforated Metal Housing	LVT	LC393	-	-
Harmonic & Flicker Tester	TTI	LC96	E2203396	April/2024
DC Power Supply	TT T-ECHNI-C	LC447	31406	March/2024



11. Deney Osilogramları:

Test Oscillograms



12. Deney Fotoğrafları:

Test Photographs



Photograph 1: General View



Photograph 2: General View



Photograph 3: Mounting Hanger



Photograph 4: LED



Photograph 5: LED



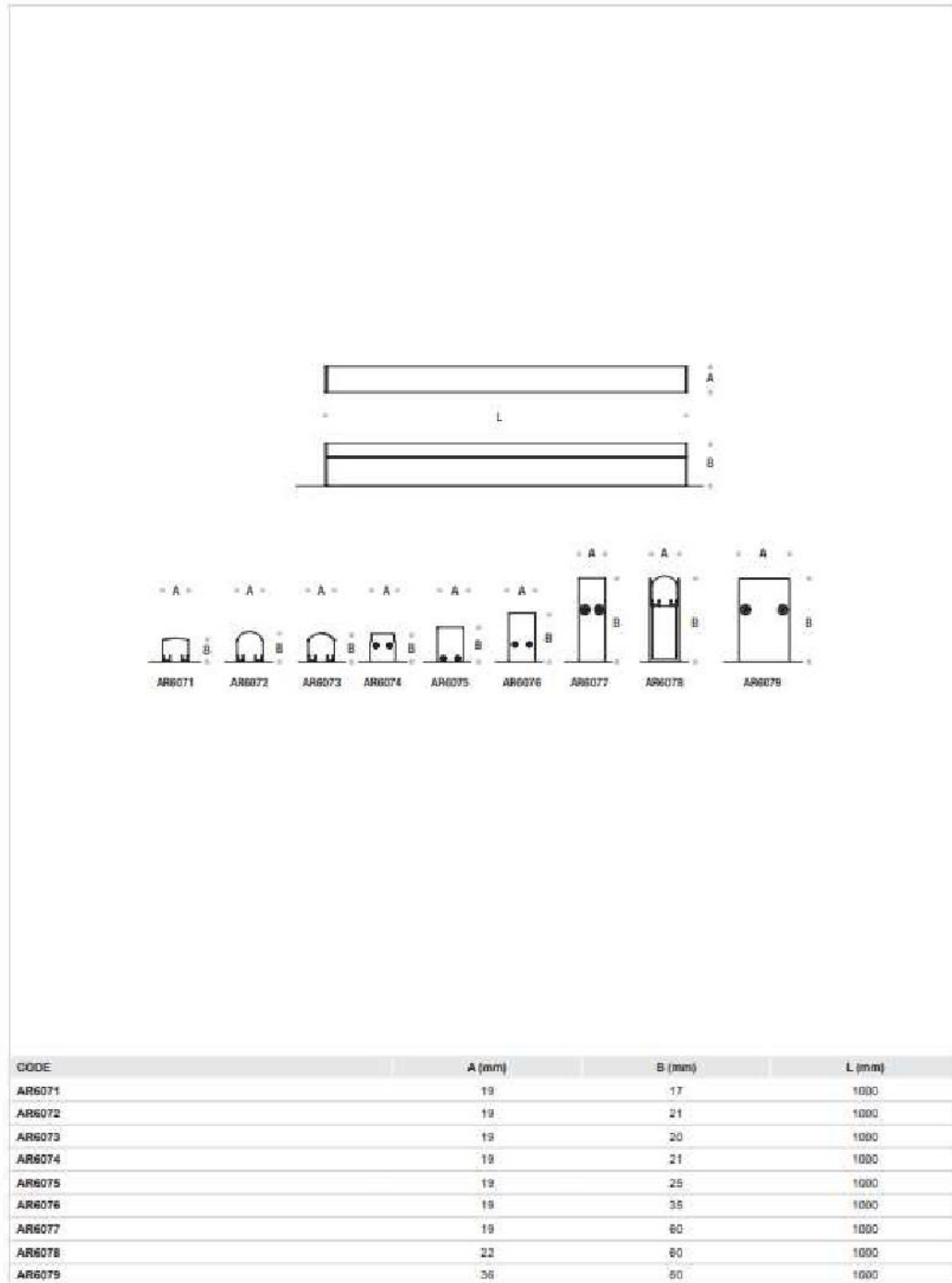
Photograph 6: Male Connector



Photograph 7: Female Connector

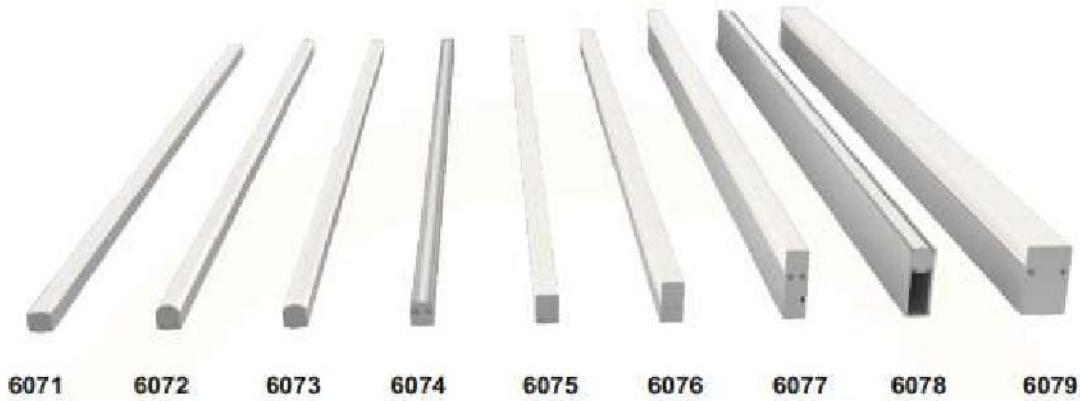
13. Firma Dokümanları Documentation of Client

iLevel



bsilighting.com

iLEVEL LED INSTALLATION GUIDE



PRODUCT FEATURES:

iLevel is a dimmable encapsulated linear LED line, suited for installation in indoor and outdoor with a broad range of colours.
It is a colour mixing linear light source in a compact, IP rated, silicone sealed aluminium profile with mounting brackets.
Available in lengths to suit your application and provides a concealed, continuous linear glare and dot free illumination for discrete architectural details and accent lines.
Designed to last in extremely harsh environments.

RECOMMENDATIONS FOR THE USER:

- 1) Before the installation, make sure that there is no voltage.
- 2) Do not touch the fitting when it is working on / switched on
- 3) Do not look at the fitting directly or from a short distance.
- 4) Disconnect / switch off the fitting before changing the lamps

NOTES:

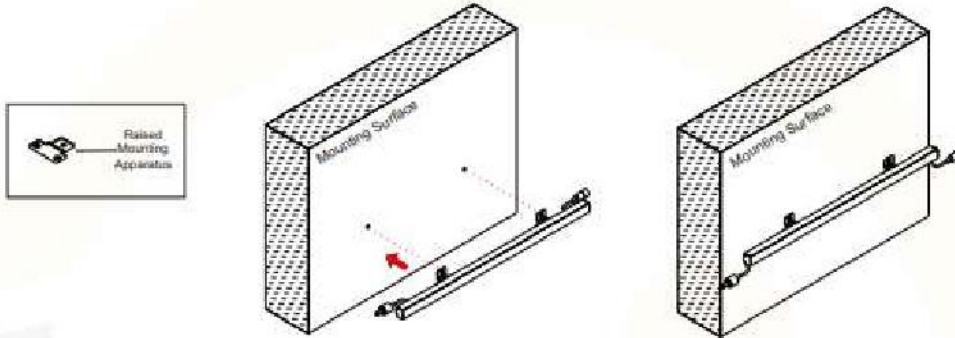
- Technical amendments are reserved.
- CE – Conformity mark
- The manufacturer is then discharged from liability when damage is caused by improper use or installation.
- Clean luminaire regularly with solvent-free cleansers from dirt and deposits. Do not use high pressure cleaners.

İLEVEL LED INSTALLATION GUIDE

1) With raised mounting bracket;

Suitable for; 6071-6072-6073-6074-6075-6076-6077-6078-6079
Mounting surface; Suitable for floor, wall and ceiling.

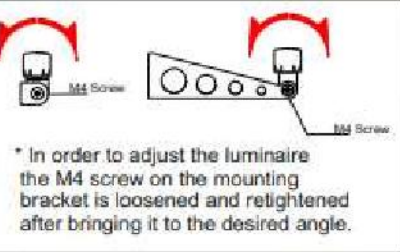
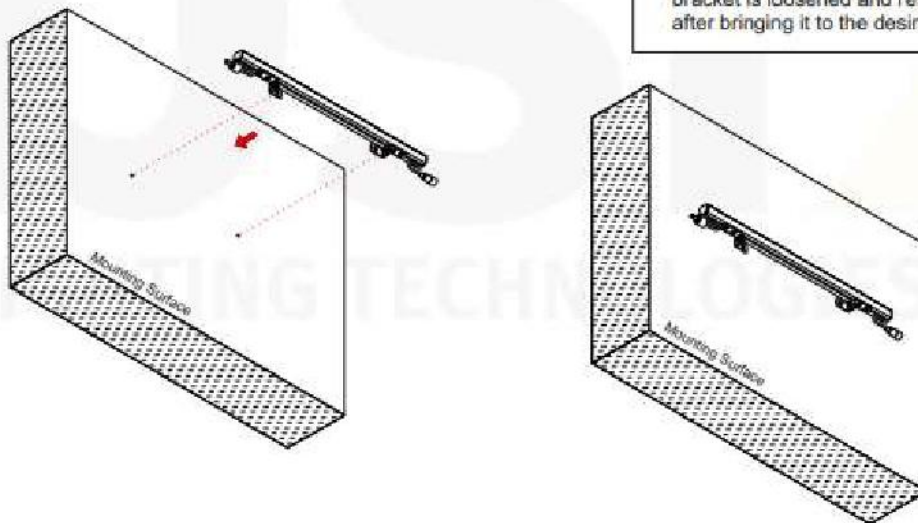
- Make holes on the wall equal to mounting apparatus and fix the plugs.
- Screw the luminaire to the wall.
- Make the electrical connection (Page 5)



2) With short adjustable mounting bracket;

Suitable for; 6071-6072-6073-6074-6075-6076-6077-6078-6079
Mounting surface; Suitable for floor, wall and ceiling.

- Make holes on the wall equal to mounting apparatus and fix the plugs.
- Screw the luminaire to the wall and adjust the angle.
- Make the electrical connection. (Page 5)





Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri Genel Amaçlı, Sabit Aydınlatma Armatürleri

*Luminaires Safety Tests
Fixed General Purpose Luminaires*



BSİ AYDINLATMA SAN. VE TİC. A.Ş.

Kritik Komponent Listesi** Critical Component List

Object / part No.	Manufacturer/ trademark	Model	Technical data	Standard	Mark(s) of conformity
Led	Osram	Duries	30x14	CRI min 80 / LM80	
Soket	Shenzhen CTL	GYD-02	IP68 şeffaf	CE	

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Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri

Genel Amaçlı, Sabit Aydınlatma Armatürleri

Luminaires Safety Tests
Fixed General Purpose Luminaires

12.05.2017

00QL2.E347955 - Light-emitting-diode Packages - Component



ONLINE CERTIFICATIONS DIRECTORY

00QL2. Light-emitting-diode

If you notice a change to your 00QL2 Listing Card, click [here](#) to
[Page Bottom](#)

Light-emitting-diode

See General Information for Light-emitting-diode Packages - Component

OSRAM OPTO SEMICONDUCTORS INC

SUITE 100

1150 KIFER RD

SUNNYVALE, CA 94086 USA

!ՕՏԵՆՈՒՄՆԸ ՕՏԵՐՆԻՆԻ

ԵՐԱՆՈՒՄԸ «ՕՏԵՆՈՒՄՆԸ ՕՏԵՐՆԻՆԻ» ԵՐԱՆՈՒՄԸ ԵՐԱՆՈՒՄԸ
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ԻՍԿԱՆՈՒՄՆԸ ՕՏԵՐՆԻՆԻ

Model Designation	Input Type	Maximum Junction Temp (°C)	Environmental Suitability	Enclosure Considerations	Isolation Voltage
DURIS Gm DnSPAo.rr bbbb-cccc	Nonisolated	175	Damp	1	3.8 Vdc
DURIS Gm JCLeSy.aaa bbbb-cccc	Nonisolated	130	Damp	4	3.6 Vdc
DURIS Gm JDSy.aaa bbbb-cccc	Nonisolated	130	Damp	4	3.6 Vdc
DURIS Gm JTLLeSy.aaa	Nonisolated	130	Damp	4	10.2 Vdc
DURIS Gm P7eTAy.aaa bbbb-cccc (\$)	Nonisolated	135	Damp	4	12 Vdc
DURIS Gm P7Le3y.aaa bbbb-cccc	Nonisolated	150	Damp	4	40 Vdc
DURIS Gm P9Lemn.rr	Nonisolated	150	Damp	4	33 Vdc
DURIS Gm PSLeon.aaa	Nonisolated	150	Damp	4	7 Vdc
DURIS Gm PSLeSn.aaa bbbb-cccc	Nonisolated	150	Damp	4	7 Vdc
DURIS Gm PUedAn.aaa bbb ccc	Nonisolated	150	Damp	4	3.3 Vdc
DURIS Gm PUeRAn.aaa bbb ccc	Nonisolated	150	Damp	4	3.3 Vdc
DURIS Gm SBLLeAy.aaa bbbb-cccc	Nonisolated	150	Damp	4	3.5 Vdc
DURIS GW P9Leon.aaa	Nonisolated	150	Damp	4	33 Vdc
DURIS LxW JDSy.aaa bbbb-cccc	Nonisolated	110	Damp	4	3.6 Vdc
DURIS LxW JNSy.aaa bbbb-cccc	Nonisolated	110	Damp	4	3.6 Vdc
Gm JSLeSy.aaa bbbb-cccc	Nonisolated	150	Damp	4	7 Vdc
Gm PSLeon.aaa bbbb-cccc	Nonisolated	150	Damp	4	7 Vdc
GW PSLeon.aaa	Nonisolated	150	Damp	4	7 Vdc
Lxx WvAM.dd bbbb-cccc Golden Dragon	Nonisolated	135	Damp	4	3.7 Vdc
OSCONIQ Gm QSLeon.aaa bbbb-cccc	Nonisolated	150	Damp	4	7 Vdc
OSLON Gm CSgeMo.rr bbbb-cccc	Nonisolated	175	Damp	4	3.8 Vdc
OSLON Gm CSpeMo.rr bbbb-cccc	Nonisolated	135	Damp	4	3.6 Vdc
OSLON Lxx CQAR.aaa bbbb-cccc	Nonisolated	175	Damp	4	3.8 Vdc
OSLON Lxx Cy7P.aaa bbbb-cccc	Nonisolated	135	Damp	4	3.8 Vdc
OSLON Lxx CyDP.aaa bbbb-cccc	Nonisolated	135	Damp	4	3.8 Vdc
OSRAM Ostar LE CW S2LN, LE UW S2LN bbbb-cccc	Nonisolated	110	Damp	4	3.7 Vdc
SOLERIQ Gm KAFqBn.rr-bbbb.cccc	Nonisolated	135	Damp	4	50 Vdc
SOLERIQ Gm KAGqBn.rr-bbbb.cccc	Nonisolated	135	Damp	4	50 Vdc
SOLERIQ Gm KAHqBn.rr-bbbb.cccc	Nonisolated	135	Damp	4	50 Vdc
SOLERIQ Gm KAqRBn.rr bbbb-cccc	Nonisolated	175	Damp	4	48 Vdc

<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=00QL2:E347955&conshortitle=Light-emitting-diode+Packages+...> 1/2

