

APPLICATION FOR TEST REPORT

On Behalf of

Yaqi Lighting Co., Ltd.

Stage Lighting

**Model: PAR-64LB, PAR-64LP, PAR-64SB, PAR-64SP, PAR-64FSB, PAR-64FSP,
PAR-64CB, PAR-64CP, PAR-56LB, PAR-56LP, PAR-56SB, PAR-56SP,
PAR-56RB, PAR-56RP, PAR-46LB, PAR-46LP, PAR-46SB, PAR-46SP,
PAR-38B, PAR-38P, PAR-36LB, PAR-36LP, PAR-36SB, PAR-36SP,
PAR-30B, PAR-30P, PAR-20B, PAR-20P, PAR-16LB, PAR-16LP,
PAR-16SB, PAR-16SP**

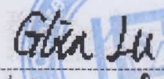

**Prepared For : Yaqi Lighting Co., Ltd.
Tianraobu Industrial Building, Hengli Town,
Dongguan,China**

**Prepared By : Shenzhen LCS Compliance Testing Laboratory Ltd.
Xingyuan Industrial Park, Tongda Road, Bao'an Blvd.,
Bao'an District, Shenzhen, Guangdong, China**

Date of Test : October 15, 2012 – November 07, 2012

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Report Number : LCS121009011QS

TEST REPORT EN 60598-2-1 Luminaires Part 2: Particular requirements Section one – Fixed general purpose luminaires	
Report reference No.	LCS121009011QS
Tested by(name + signature)	Glin Lu 
Approved by(name + signature).....	Hart Qiu 
Date of issue	November 07, 2012
Contents	25 pages
Testing laboratory	
Name	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	Xingyuan Industrial Park, Tongda Road, Bao'an Blvd., Bao'an District, Shenzhen, Guangdong, China
Testing location	As above
Client	
Name	Yaqi Lighting Co., Ltd.
Address	Tianraobu Industrial Building, Hengli Town, Dongguan, China
Manufacturer	
Name	Yaqi Lighting Co., Ltd.
Address	Tianraobu Industrial Building, Hengli Town, Dongguan, China
Test specification	
Standard.....	EN 60598-1: 2008+A11: 2009; EN 60598-2-1: 1989; EN 62493: 2010
Test procedure	Compliance with EN 60598-1: 2008+A11: 2009; EN 60598-2-1: 1989; EN 62493: 2010
Non-standard test method	N.A.
Test item Description	
Test item Description	Stage Lighting
Trademark	N.A.
Model and/or type reference	PAR-64LB, PAR-64LP, PAR-64SB, PAR-64SP, PAR-64FSB, PAR-64FSP, PAR-64CB, PAR-64CP, PAR-56LB, PAR-56LP, PAR-56SB, PAR-56SP, PAR-56RB, PAR-56RP, PAR-46LB, PAR-46LP, PAR-46SB, PAR-46SP, PAR-38B, PAR-38P, PAR-36LB, PAR-36LP, PAR-36SB, PAR-36SP, PAR-30B, PAR-30P, PAR-20B, PAR-20P, PAR-16LB, PAR-16LP, PAR-16SB, PAR-16SP
Rating(s).....	220-240V~, 50Hz, Max. 1000W

Copy of marking plate

Stage Lighting

Model: PAR-64LB

220-240V~, 50Hz, Max. 1000W



Yaqi Lighting Co., Ltd.

MADE IN CHINA

EN 60598-2-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.2 (0)	General test requirements		P
1.2 (0.1)	Information for luminaires design considered	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]	P
1.2 (0.3)	More sections applicable	220-240V~	N
1.4 (2)	CLASSIFICATION		P
1.4 (2.2)	Type of protection	Class I	P
1.4 (2.3)	Degree of protection	IPX0	P
1.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Fixed luminaries	P
	Luminaire not suitable for direct mounting on normally flammable surfaces	No	N
1.4 (2.5)	Luminaire for normal use	Yes	P
	Luminaire for rough service	No	N
1.5 (3)	MARKING		P
1.5 (3.2)	Markings on luminaires	See marking label	P
	Position of the marking		P
	Format of symbols/text	The height of symbols more than 5mm, text more than 2mm	P
1.5 (3.3)	Additional information		P
	Language of instructions	In English	P
1.5 (3.3.1)	Combination luminaires	Not combination luminaire	N
1.5 (3.3.2)	Nominal frequency in Hz		N
1.5 (3.3.3)	Operating temperature	Operating temperature is 25°C	N
1.5 (3.3.4)	Symbol or warning notice		N
1.5 (3.3.5)	Wiring diagram		N
1.5 (3.3.6)	Special conditions	No such special conditions	N
1.5 (3.3.7)	Metal halid lamp luminaire – warning		N
1.5 (3.3.8)	Limitation for semi-luminaires		N
1.5 (3.3.9)	Power factor and supply current		P
1.5 (3.3.10)	Suitability for use indoors	Use indoor only	P
1.5 (3.3.11)	Luminaires with remote control	Not such construction	N
1.5 (3.3.12)	Clip-mounted luminaire - warning		N
1.5 (3.3.13)	Specifications of protective shields	No such parts	N
1.5 (3.3.14)	Symbol for nature of supply	~	P

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Clause	Requirement - Test	Result - Remark	Verdict
1.5 (3.3.15)	Rated current of socket outlet	No socket outlet	N
1.5 (3.3.16)	Rough service luminaire	Normal service luminaire	N
1.5 (3.3.17)	Mounting instruction for type Y, Type Z and some type X attachments		N
1.5 (3.3.18)	Non-ordinary luminaires with PVC cable	Ordinary luminaires	N
1.5 (3.3.19)	Protective conductor current in instruction if applicable		N
1.5 (3.3.20)	Provided with information if not intended to be mounted within arms reach		N
1.5 (3.4)	Test with water	15s	P
	Test with hexane	15s	P
	Legible after test	Still legible	P
	Label attached	Still attached	P

1.6 (4)	CONSTRUCTION		P
1.6 (4.2)	Components replaceable without difficulty		P
1.6 (4.3)	Wireways smooth and free from sharp edges		P
1.6 (4.4)	Lampholders		P
1.6 (4.4.1)	Integral lampholder		N
1.6 (4.4.2)	Wiring connection		P
1.6 (4.4.3)	Lampholder for end-to-end mounting		N
1.6 (4.4.4)	Positioning		P
	- pressure test (N).....:		P
	After test the lampholder comply with relevant standard sheets and show no damage		P
	After test on singal-capped lampholder the lampholder have not moved form its position and show no permanent deformation		P
	- bending test (N).....:		P
	After test the lamholder have not moved from its position and show no permanent deformation		P
1.6 (4.4.5)	Peak pulse voltage	No ignitors	N
1.6 (4.4.6)	Centre contact	No ignitors	N
1.6 (4.4.7)	Parts in rough service luminaires resistant to tracking	Not for rough service	N

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Clause	Requirement - Test	Result - Remark	Verdict
1.6 (4.4.8)	Lamp connectors		P
1.6 (4.4.9)	Caps and bases correctly used		P
1.6 (4.5)	Starter holders	No starter holders	N
	Starter holder in luminaries other than Class II		N
	Starter holder Class II construction		N
1.6 (4.6)	Terminal blocks		P
	Tails		P
	Unsecured blocks		P
1.6 (4.7)	Terminals and supply connections		P
1.6 (4.7.1)	Contact to metal parts		P
1.6 (4.7.2)	Location stranded wires		P
	8 mm test live conductor		P
	8 mm test earth conductor		P
1.6 (4.7.3)	Terminals for supply conductors		N
1.6 (4.7.3.1)	Welded connections		N
	- stranded or solder conductor		N
	- spot welding		N
	- welding between wires		N
	- type Z attachment		N
	- mechanical test according to 15.8.2		N
	- electrical test according to 15.9		N
	- heat test according to 15.9.2.3 and 15.9.2.4		N
1.6 (4.7.4)	Terminals other than supply connection		P
1.6 (4.7.5)	Heat-resistant wiring/sleeves		N
1.6 (4.7.6)	Multi-pole plug	No plug	N
	- test at 30 N		N
1.6 (4.8)	Switches:	No switches	N
	- adequate rating		N
	- adequate fixing		N
	- polarized supply		N
	- Compliance with 61058-1 for electronic switches		N
1.6 (4.9)	Insulating lining and sleeves		P
1.6 (4.9.1)	Retention		P
	Method of fixing:		P

EN 60598-2-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.6 (4.9.2)	Insulated linings and sleeves		P
	Resistant to temperature >20°C to the wire temperature or		P
	a) & c) Insulation resistance and electric strength		N
	b) Ageing test. Temperature (°C).....:		N
1.6 (4.10)	Insulation of Class II luminaires	Class I	N
1.6 (4.10.1)	No contact, mounting surface - accessible metal parts - wiring of basic insulation		N
	Safe installation fixed luminaires		N
	Capacitors and switches	No such parts	N
	Interference suppression capacitors according to IEC 60384-14		N
1.6 (4.10.2)	Assembly gaps:		N
	- not coincidental		N
	- no straight access with test probe		N
1.6 (4.10.3)	Retention of insulation:		N
	- fixed		N
	- unable to be replaced; luminaire inoperative		N
	- sleeves retained in position		N
	- lining in lampholder		N
1.6 (4.11)	Electrical connections		P
1.6 (4.11.1)	Contact pressure	No pressure transmitted to the insulating material	N
1.6 (4.11.2)	Screws:		P
	- Self-tapping screws		P
	- thread-cutting screws		N
1.6 (4.11.3)	Screw locking:		N
	- spring washer		N
	- rivets	No rivet provided	N
1.6 (4.11.4)	Material of current-carrying parts	> 50% copper	P
1.6 (4.11.5)	No contact to wood or mounting surface	No wood	P
1.6 (4.11.6)	Electro-mechanical contact systems	No such construction	N
1.6 (4.12)	Mechanical connections and glands		P
1.6 (4.12.1)	Screw not made of soft metal		P
	Screws of insulating material		N
	Torque test: torque (Nm); part		N

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Clause	Requirement - Test	Result - Remark	Verdict
	Torque test: torque (Nm); part		N
	Torque test: torque (Nm); part		N
1.6 (4.12.2)	Screw with diameter < 3 mm screw into metal		N
1.6 (4.12.4)	Locked connections:		P
	- fixed arms; torque (Nm)		P
	- lampholder; torque (Nm)		P
	- push-button switches; torque (Nm)	No such switches	N
1.6 (4.12.5)	Screwed glands; force (N)		N
1.6 (4.13)	Mechanical strength		P
1.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)	No fragile parts	N
	- other parts; energy (Nm)	0.35Nm for enclosure	P
	1) live parts	Inaccessible	P
	2) linings	Doesn't impaired	P
	3) protection	IPX0	P
	4) covers	No such covers	P
1.6 (4.13.2)	Metal parts enclosing live parts shall have adequate mechanical strength		N
1.6 (4.13.3)	Straight test finger	30N	N
1.6 (4.13.4)	Rough service luminaires	Normal service luminaires	N
	IP 54 or higher		N
	a) fixed		N
	b) hand-held		N
	c) delivered with a stand		N
	d) for temporary installations and suitable for mounting on a stand		N
1.6 (4.13.6)	Tumbling barrel		N
1.6 (4.14)	Suspensions and adjusting devices	No such device	N
1.6 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		P
	C) bracket arm; force (N)		P
	D) load track-mounted luminaires		N
	E) clip-mounted luminaires, glass-shelve; thickness (mm)		N
	metal rod; diameter (mm)		N
1.6 (4.14.2)	Load to flexible cables:		N

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Clause	Requirement - Test	Result - Remark	Verdict
	mass (kg)		N
	stress in conductors (N/mm ²)		N
	Mass (kg) of semi-luminaires		N
	Bending moment (Nm) of semi-luminaires :		N
1.6 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles	45	P
	- strands broken		P
	- electric strength test afterwards		P
1.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N
1.6 (4.14.5)	Guide pulleys	No such construction	N
1.6 (4.14.6)	Strain on socket-outlets	Not such unit	N
1.6 (4.15)	Flammable materials:	No flammable materials	N
	- glow-wire test 650°C		N
	- spacing ≥ 30 mm		N
	- screen withstanding test of 13.3.1		N
	- screen dimensions		N
	- no fiercely burning material		N
	- thermal protection		N
	- electronic circuits exempted		N
1.6 (4.15.2)	Luminaires made of thermoplastic material		P
	a) construction		P
	b) temperature sensing control		N
	c) surface temperature		N
1.6 (4.16)	Luminaires for mounting on normally flammable surfaces	See section 12.6	P
	No lamp control gear		N
1.6 (4.16.1)	Lamp control gear shall spacing:		P
	- spacing 10 mm		P
	- spacing 35 mm		N
1.6 (4.16.2)	Thermal protection:	No such component	N
	- in lamp control gear		N
	- external		N
	- fixed position		N
	- temperature marked lamp control gear		N
1.6 (4.16.3)	Design to satisfy the test of 12.6		N
1.6 (4.17)	Drain holes	No drain holes	N

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Clause	Requirement - Test	Result - Remark	Verdict
	Clearance at least 5 mm		N
1.6 (4.18)	Resistance to corrosion:		P
1.6 (4.18.1)	- rust-resistance	Painted with rust-resistance material	P
1.6 (4.18.2)	- season cracking in copper		P
1.6 (4.18.3)	- corrosion of aluminium	No aluminium used	N
1.6 (4.19)	Igniters compatible with ballast	No igniters used	N
1.6 (4.20)	Rough service vibration	Not such appliance	N
1.6 (4.21)	Protective shield		P
1.6 (4.21.1)	Shield fitted		P
	Shield of glass if tungsten halogen lamps		N
1.6 (4.21.2)	Particles from a shattering lamp not impair safety		P
1.6 (4.21.3)	No direct path		P
1.6 (4.21.4)	Impact test on shield		P
	Glow-wire test on lamp compartment		N
1.6 (4.22)	Attachments to lamps	No such attachments	N
1.6 (4.23)	Semi-luminaires comply with Class II	Not such appliance	N
1.6 (4.24)	UV radiation for tungsten halogen lamps and metal halide lamps (Annex P)	No such appliance	N
1.6 (4.25)	No sharp point edges	No sharp points or edges	P
1.6 (4.26)	Short-circuit protection		N
1.6 (4.26.1)	Uninsulated accessible SELV parts		N
1.6 (4.26.2)	Short circuit test		N
1.6 (4.26.3)	Test chain according to figure 29		N

1.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
	Working voltage (V)	220-240V~	P
	Voltage form	Sinusoidal [\surd] Non-sinusoidal []	P
	PTI	< 600 [\surd] \geq 600 []	P
	Impulse withstand category (normal category II) (category III annex U)		N
	Rated pulse voltage (kV)		N
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm)	cl>3.0mm, limit: 1.5mm cr>3.2mm, limit: 2.5mm	P
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm)	cl>3.0mm, limit: 1.5mm cr>3.2mm, limit: 2.5mm	P

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Clause	Requirement - Test	Result - Remark	Verdict
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: cr (mm); cl (mm)		N
	(4) Outer surface of cable where it is clamp and metal parts: cr (mm); cl (mm)		N
	(5)not used		N
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm)		N
1.8 (7)	PROVISION FOR EARTHING		P
1.8 (7.2.1 + 7.2.3)	Accessible Metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0.5 Ω	0.04 Ω	P
	Self-tapping screws used		P
	Thread-forming screws		N
	Thread-forming screws used in a groove		N
	Earth marks contact first		P
1.8 (7.2.2 +7.2.3)	Earth continuity in joints etc.		P
1.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N
1.8 (7.2.5)	Earth terminal integral part of Connector socket		N
1.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
1.8 (7.2.7)	Electrolytic Corrosion of the earth terminal		P
1.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
1.8 (7.2.10)	Class II luminaire for looping-in		N
	Double or reinforced insulation to functional earth		N
1.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P

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Clause	Requirement - Test	Result - Remark	Verdict

1.9 (14)	SCREW TERMINALS		P
	Separately approved: component list		P
	Part of the luminaire		N

1.9 (15)	SCREWLESS TERMINALS and electrical connections		N
	Separately approved: component list		N
	Part of the luminaire		N

1.10 (5)	EXTERNAL AND INTERNAL WIRING		P
1.10 (5.2)	Supply connection and external wiring		P
1.10 (5.2.1)	Means of connection.....: Supply lead		P
1.10 (5.2.2)	Type of cable		P
	Nominal cross-section area (mm ²)	1.5m ²	P
	Cables equal to IEC 60227 and IEC 60245		P
1.10 (5.2.3)	Type of attachment, X ,Y or Z	Type Y	P
1.10 (5.2.5)	Type Z not connected to screws		N
1.10 (5.2.6)	Cable entries		P
	- suitable for introduction		P
	- adequate degree of protection		P
1.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
1.10 (5.2.8)	Insulating bushings:		N
	- suitably fixed		N
	- material in bushings		N
	- material not likely to deteriorate		N
	- tubes or guard made of insulating material		N
1.10 (5.2.9)	Locking of screw bushings	No such component	N
1.10 (5.2.10)	Cord anchorage:		N
	- covering protected from abrasion		N
	- clear how to be effective		N
	- no mechanical or thermal stress		N
	- no tying of cables into knots etc.		N
	- insulating material or lining		N

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Clause	Requirement - Test	Result - Remark	Verdict
1.10 (5.2.10.1)	Cord anchorage for type X attachment cord	Not such construction	N
	a) at least one part fixed		N
	b) types of cable		N
	c) no damaging of the cable		N
	d) whole cable can be mounted		N
	e) no touching of clamping screws		N
	f) metal screw not directly on cable		N
	g) replacement without special tool		N
	Glands not used as anchorage		N
	Labyrinth type anchorage		N
1.10 (5.2.10.2)	Adequate cord anchorages for type Y and type Z attachments	Type Y	P
1.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)		P
	- torque test: torque (Nm)		P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
1.10 (5.2.11)	External wiring passing into luminaire		P
1.10 (5.2.12)	Looping-in terminals	Not looping-in appliance	N
1.10 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N
1.10 (5.2.14)	Mains plug same protection	No plug	N
	Class III luminaire plug		N
1.10 (5.2.16)	Appliance inlets (IEC 60320)	No appliance inlet	N
	Appliance couplers of class II type		N
1.10 (5.2.17)	No standardized in interconnecting cables assembled	No such parts	N
1.10 (5.2.18)	Used plug in accordance with		N
	- IEC 60083		N
	- other standard		N
1.10 (5.3)	Internal wiring		P
1.10 (5.3.1)	Internal wiring of suitable size and type	22AWG	P

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Clause	Requirement - Test	Result - Remark	Verdict
	Through wiring		N
	- not delivered/ mounting instruction		N
	- factory assembled		N
	- socket outlet loaded (A).....:		N
	- temperatures:		N
	Green-yellow for earth only		P
1.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-Sectional area (mm ²)		P
	Insulation thickness		P
	Extra insulation added where necessary		N
1.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limited device		N
	Adequate cross-section area and insulation thickness		N
1.10 (5.3.1.3)	Double or reinforced insulation for class II		N
1.10 (5.3.1.4)	Conductors without insulation		N
1.10 (5.3.1.5)	SELV current-carrying parts		P
1.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N
1.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N
	Joints, raising/lowering devices		P
	Telescopic tubes etc.		N
	No twisting over 360 ⁰		P
1.10 (5.3.3)	Insulating bushings		N
	- suitable fixed		N
	- material in bushings		N
	- material not likely to deteriorate		N
	- cables with protective sheath		N
1.10 (5.3.4)	Joints and Junctions effectively insulated		P
1.10 (5.3.5)	Strain on internal wiring		N
1.10 (5.3.6)	Wire carriers		N
1.10 (5.3.7)	Wire ends not tinned		N
	Wire ends tinned: no cold flow		P

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Clause	Requirement - Test	Result - Remark	Verdict
1.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
1.11 (8.2.1)	Live parts not accessible with standard test finger		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 and adjustable luminaires		N
	Basic insulated parts not accessible with $\varnothing 50\text{mm}$ probe from outside, within arms reach, on wall-mounted luminaires		P
	Lamp and starholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N
	Basic insulation only accessible under lamp or starter replacement		P
	Double-ended tungsten filament lamp		P
	Insulation lacquer not reliable		P
	Double-ended high pressure discharge lamp		P
	Relevant warning according to 3.2.18 fitted to the luminaire		N
1.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N
1.11 (8.2.3 a)	Class II luminaire:	Class I luminaire	N
	- basic insulated metal parts not accessible during starter or lamp replacement		N
	- basic insulated not accessible other than during starter or lamp replacement		N
	- glass protective shields not used as supplementary insulation		N
1.11 (8.2.3b)	BC lampholder of metal in class I luminaires shall be earthed		N
1.11 (8.2.3c)	Class III luminaires with expose SELV parts:	Class I luminaire	N
	Ordinary luminaire :		N
	- touch current		N
	- no-load voltage		N
	- other than ordinary luminaire:		N
	- nominal voltage		N
1.11 (8.2.4)	Portable luminaire:		N

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Clause	Requirement - Test	Result - Remark	Verdict
	- protection independent of supporting surface		N
	- terminal block completely covered		N
1.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
1.11 (8.2.6)	Covers reliably secured		N
1.11 (8.2.7)	Discharging of capacitors >0,5 μ F		N
	Portable plug connected luminaire with capacitor		N
	Discharge device on or within capacitor		N
	Discharge device mounted separately		N
1.11.1 (-)	Protective parts for lamp caps not removable by hand in hand-held inspection luminaires		N
1.11.2 (-)	Fixing of parts within 2 m from floor		N
1.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
1.12 (12.3)	Endurance test:		P
	- mounting-position	Ceiling	P
	- test temperature ($^{\circ}$ C)	35 $^{\circ}$ C	P
	- total duration (h)	240hrs. Totally 10 cycles, each 24h. Appliance worked as normal	P
	- supply voltage: Un factor; calculated voltage (V)	1.1x240V~	P
	- lamp used	Tungsten Lamp	P
1.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N
	- marking legible		P
	- no cracks, deformation etc.		P
1.12 (12.4)	Thermal test (normal operation)	(see table 12.4)	P
1.12 (12.5)	Thermal test (abnormal operation)		N
	Short-circuit of starter contacts		N
	Lamps removed and not replaced		N
1.12 (12.6)	Thermal test (failed lamp control gear condition):		N
1.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		N

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Clause	Requirement - Test	Result - Remark	Verdict
	- case of abnormal conditions	No electronic circuit	N
	- electronic ballast		N
	- measured winding temperature (°C): at 1,1 Un		N
	- measured mounting surface temperature (°C): at 1,1 Un		N
	- calculated mounting surface temperature(°C)		N
	- track-mounted luminaires		N
1.12 (12.6.2)	Temperature sensing control:		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- track-mounted luminaires		N
1.12 (12.7)	Thermal test (failed ballast or transformer in plastic luminaires):		N
1.12 (12.7.1)	Luminaire without temperature sensing control		N
1.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N
	Test method 12.7.1.1 or Annex V		N
	Test according to 12.7.1.1:		N
	- case of abnormal conditions		N
	- Ballast failure at supply voltage (V)		N
	- Components retained in place after the test		N
	- Test with standard test finger after the test		N
	Test according to Annex V:		N
	- case of abnormal conditions		N
	- measured winding temperature (°C): at 1,1 Un.. :		N
	- measured temperature of fixing point/exposed part (°C): at 1,1Un..... :		N
	- calculated temperature of fixing point/exposed part (°C)		N
	Ball-pressure test:		N
	- part tested; temperature (°C)..... :		N
	- part tested; temperature (°C)..... :		N
1.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N
	- case of abnormal conditions		N

EN 60598-2-1			
Clause	Requirement - Test	Result - Remark	Verdict
	- measured winding temperature (°C): at 1,1 Un..... :		N
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un..... :		N
	- calculated temperature of fixing point/exposed part (°C)		N
	Ball-pressure test:		N
	- part tested; temperature (°C)..... :		N
	- part tested; temperature (°C)..... :		N
1.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N
	- case of abnormal conditions		N
	- Components retained in place after the test		N
	- Test with standard test finger after the test		N
1.12 (12.7.2)	Luminaire with temperature sensing control		N
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- case of abnormal conditions		N
	- highest measured temperature of fixing point/exposed part (°C):..... :		N
	Ball-pressure test:		N
	- part tested; temperature (°C)..... :		N
	- part tested; temperature (°C)..... :		N
1.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
1.12 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IPX0	P
	- mounting position during test		N
	- fixing screws tightened; torque (Nm)		N
	- tests according to clauses		N
	- electric strength		N
	a) no deposit in dust-proof luminaire		N
	b) no talcum in dust-tight luminaire		N
	c) no trace of water on current-carrying parts or SELV parts or where it could become a hazard		N

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Clause	Requirement - Test	Result - Remark	Verdict
	d) i) For luminaires without drain holes – no water entry		N
	d) ii) For luminaires with drain holes – no hazardous water entry		N
	e) no water in watertight luminaire		N
	f) no contact with live parts (IP 2X)		N
	f) no entry into enclosure (IP 3X and IP 4X)		P
	f) no contact with live parts (IP3X and IP4X)		N
	g) no trace of water on part of lamp requiring protection from splashing water		N
	h) no damage of protective shield or glass envelope		N
1.13 (9.3)	Humidity test 48h	Relative humidity 93%, temperature 25°C, 48h, followed by hi-pot test	P
1.13.1 (-)	Parts removed before humidity treatment		--
1.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
1.14 (10.2.1)	Insulation resistance test:		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø.....:		N
	Insulation resistance:		P
	SELV:		--
	- between current-carrying parts of different polarity..... :		N
	- between current-carrying parts and mounting surface		N
	- between current-carrying parts and metal parts of the luminaire		N
	Other than SELV:		--
	- between live parts of different polarity :	>100 MΩ, limits: 2 MΩ	P
	- between live parts and mounting surface :	>100MΩ limits: 2 MΩ	P
	- between live parts and metal parts..... :		N
	- between live parts of different polarity through action of a switch		N
1.14 (10.2.2)	Electric strength test:		P
	Dummy lamp		N
	Luminaires with ignitors after 24 h test		N
	Luminaires with manual ignitors		N

EN 60598-2-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Test voltage (V):		P
	SELV:		--
	- between current-carrying parts of different polarity..... :		N
	- between current-carrying parts and mounting surface :		N
	- between current-carrying parts and metal parts of the luminaire :		N
	Other than SELV:		--
	- between live parts of different polarity :	1480Vac, 1min, no breakdown	P
	- between live parts and mounting surface :	1480Vac, 1min, no breakdown	P
	- between live parts and metal parts..... :		N
1.14 (10.3)	Touch current (mA)	0.18mA	P
1.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
1.15 (13.2.1)	Ball-pressure test:		P
	- part tested; temperature (°C)		N
	- part tested; temperature (°C)		N
1.15 (13.3.1)	Needle flame test (10 s):		N
	- part tested		N
	- part tested		N
1.15 (13.3.2)	Glow-wire test (650 °C):		P
	- part tested		N
	- part tested		N
1.15 (13.4.2)	Tracking test: part tested		N
	CENELEC COMMON MODIFICATIONS (EN)		--
1.5 (3)	MARKING		--
1.5.(3.3.301)	Adequate warning on the package		—
1.10 (5)	EXTERNAL AND INTERNAL WIRING		—
1.10 (5.2.1)	Connecting leads		N
	- without a means for connection to the supply		N
	- terminal block specified		N
	- relevant information provided		N
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2,12 and 13.2 of Part 1		N

EN 60598-2-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.10 (5.2.2)	Cables equal to HD21 S2 or HD22 S2		N
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N
(3.3)	DK: power supply cord with label		N
	IT: warning label on Class 0 luminaire		N
(4.5.1)	DK: socket-outlets		N
(5.2.1)	CY, DK, FI, SE, GB: type of plug		N
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N
(4&5)	FR: Shuttered socket-outlets 10/16A		N
(13.3)	GB: Requirements according to United Kingdom Building Regulation		N
(13.3.2)	FR: Glow-wire test 850°C alt. 750°C for luminaires in premises open to public or 960°C for luminaires in emergency exits		N

Tables

ANNEX 1: components						P
object/part No.	Code	manufacturer/trademark	type/model	technical data	standard	mark(s) of conformity
Supply cord	B	Guangdong Rifeng Electrical Cable Co.,Ltd.	H05RR-F	300/500V, 3x1.5mm ²	DIN VDE 0281-5	VDE 40015999
Tube	B	Dongguan Juyou Insulation Materials Co.,Ltd.	Φ6*10	125°C, 600V, VW-1	UL 1441	UL E255729
Internal wire	B	Dongguan Chengxing Electronic Co.,Ltd.	1015	105°C, 600V, 22AWG	UL 758	UL E249743
Lamp holder	B	TSUN CHAN ENTERPRISE CO.,LTD.	TC-101	600V, 1500W	UL 496	UL E127321
Terminal block	B	TSUN CHAN ENTERPRISE CO.,LTD	TC-613	250VAC, 1.5mm ²	EN 60998-2-1; EN 60998-2-2	VDE 40021332

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

ANNEX 2: temperature measurements, thermal tests of Section 12					P	
Type reference	PAR-64LB			P		
Lamp used	Tungsten Lamp			P		
Lamp control gear used.....	--			N		
Mounting position of luminaire.....	See product manual			P		
Supply wattage (W)	1000W			P		
Supply current (A)	5A			P		
Calculated power factor.....	1.000			P		
Table: measured temperatures corrected for ta = 25°C :					P	
- abnormal operating mode.....	N.A.			N		
- test 1: rated voltage.....	240V~			P		
- test 2: 1,06 times rated voltage or 1,05 times Rated wattage	1.06X240V~			P		
- test 3: Load on wiring to socket-outlet, 1.06 times voltage or 1.05 times wattage	--			N		
- test 4: 1,1 times rated voltage or 1,05 times rated wattage				N		
Through wiring or looping-in wiring loaded by acurrent of A during the test.....	--			N		
Temperature(°C) of part	Clause 12.4 - normal				Clause 12.5 - abnormal	
	Test 1	Test 2	Test 3	Limits(°C)	Test 4	Limit (°C)
Enclosure near lamp	62.6	61.3	---	85	--	---
Input wire	53.6	52.1	--	105	--	--

Tables

Lamp holder	86.1	85.3	--	145	--	--
Mounting surface	31.2	31.3	--	90	--	--
Ambient	25.0	25.1	--	--	--	--

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

	ANNEX 4: screwless terminals (part of the luminaire)		--
(15)	SCREWLESS TERMINALS		--
(15.2)	Type of terminal :		---
	Rated current (A) :		---
(15.3.1)	Material		N
(15.3.2)	Clamping		N
(15.3.3)	Stop		N

Tables

(15.3.4)	Unprepared conductors		N							
(15.3.5)	Pressure on insulating material		N							
(15.3.6)	Clear connection method		N							
(15.3.7)	Clamping independently		N							
(15.3.8)	Fixed in position		N							
(15.3.10)	Conductor size		N							
	Type of conductor		N							
(15.5.1)	Terminals internal wiring		N							
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N							
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N							
	Insertion force not exceeding 50 N		N							
(15.5.2)	Permanent connections: pull-off test (20 N)		N							
(15.6)	Electrical tests		--							
	Voltage drop (mV) after 1 h (4 samples).... :		N							
	Voltage drop of two inseparable joints		N							
	Number of cycles		N							
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N							
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		N							
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N							
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N							
(15.7)	Terminals external wiring		N							
	Terminal size and rating		N							
(15.8.1)	Pull test spring-type terminals (4 samples); pull (N)		N							
	Pull test pin or tab terminals (4 samples); pull (N)		N							
(15.9)	Contact resistance test		N							
	Voltage drop (mV) after 1 h		N							
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)									

Tables

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)										

ANNEX 5 EMF		
	The tested product also complies to the requirements of EN 62493: 2010	--
	Limit.....0.85	Measured max.:.....0.17
		P

ATTACHMENT 1

Photo Documentation

View:
Model:
PAR-64LB

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 1

View:

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 2

ATTACHMENT 1

Photo Documentation

View:

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 3

View:

Model:
PAR-16LB

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 4

ATTACHMENT 1

Photo Documentation

View:
Model:
PAR-20P

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 5

View:
Model:
PAR-30B

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 6

ATTACHMENT 1

Photo Documentation

View:
Model:
PAR-30P

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 7

View:
Model:
PAR-36SP

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 8

ATTACHMENT 1

Photo Documentation

View:
Model:
PAR-38B

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 9

View:
Model:
PAR-46LB

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 10

ATTACHMENT 1

Photo Documentation

View:
Model:
PAR-56LB

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 11

View:
Model:
PAR-56LP

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 12

ATTACHMENT 1

Photo Documentation

View:
Model:
PAR-56SP

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 13

View:
Model:
PAR-64CP

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 14

ATTACHMENT 1

Photo Documentation

View:
Model:
PAR-64FSB

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 15

View:
Model:
PAR-64LB

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 16

ATTACHMENT 1

Photo Documentation

View:
Model:
PAR-64LP

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 17

View:
Model:
PAR-64SB

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 18