



Tube

RECESSED DIRECTIONAL SPOTLIGHTS | ECO-DALI SERIES

Tube is our adjustable spotlight with a concentrated beam that creates a bright light effect. Spotlight is highly flexible: rotates through 350° and pivots through 90°. Modern housing that enhances the architectural spaces. Directional beam is perfect for retail shops and commercial spaces, art and exhibition galleries and showrooms.

The modern touch is given by the aluminum housing and three color options: signal white, jet black and white aluminum.

Available in two series, with different add-ons and controls:

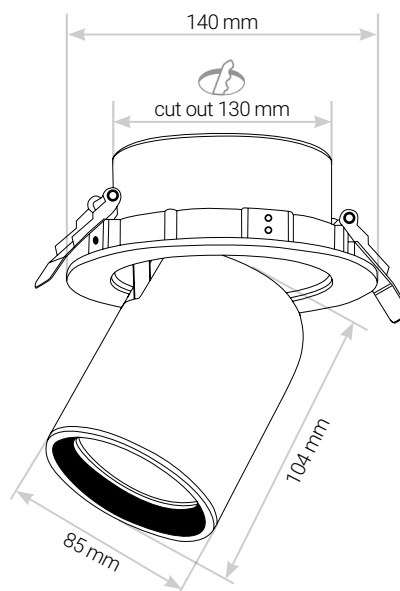
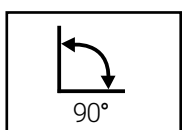
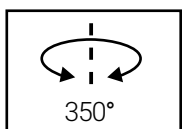
- Tube TEC – the standard for any project in the retail sector
- Tube ECO-DALI – with DALI controls for illumination adjustments

Applications

High End Grocery & Supermarkets | Fashion Retailers | Hospitality | Art & Exhibitions

Features & Benefits

- CRI 80 as standard, 90, 93 and 95 available
- 10 color temperatures: 2700K, 3000K, 3500K, 4000K, FAS, AGI3000, AGI3500, AGI4000, AMB2200, Sunset
- Long rated life: L90/B10@50.000h
- Luminaire efficiency: 91 lm/W @4000K
- Dimmable (for ECO Series)



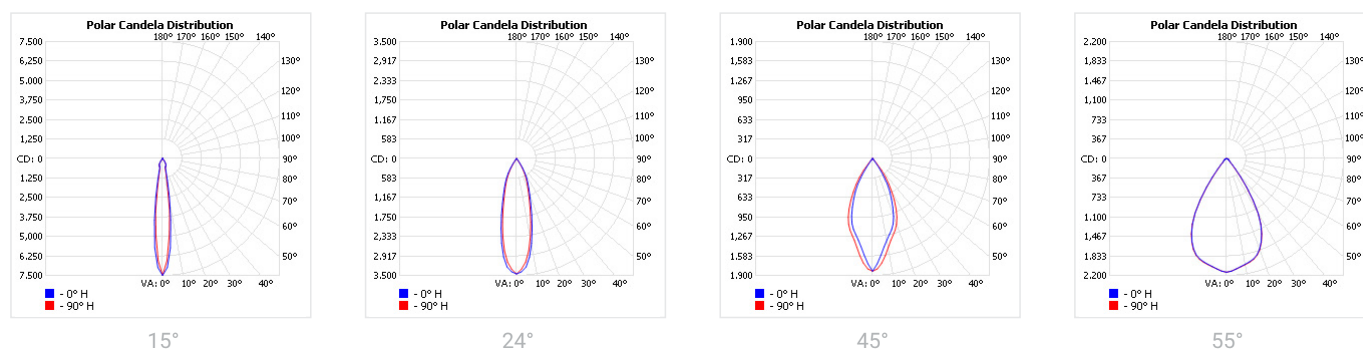
Specifications

Power consumption	14W, 20W, 21W
Dimensions	Ø140 x Ø85 x 104 ± 1mm - cut out Ø130 ±1mm
Weight	0,8 Kg
Housing materials	Aluminium, Glass
IK code	IK02
THD (at 230V, 50Hz, Full load)	<8%
Protection class	Safety class 1
Operating temperature [°C]	-20 ... +45 °C / -4F ... +113F
Operating humidity [%]	10 ÷ 85
Power factor	≥0.95
AC Input [Vac]	220 - 240 VAC
Lens angle [°]	15°, 24°, 45°, 55°
Lifespan [h]	50,000
Housing color	○ RAL9003 - Signal white ● RAL9005 - Jet black ● RAL9006 White aluminium
Lumen maintenance	L90/B10@50.000h at 25°C
IP factor	IP20
Control optional	ECO-DALI
Warranty [years]	5
Storage temperature range [°C]	-20...+55°C / -4F ... +131F
Emergency option	-

#	Standard	Food	Fashion	AGI	Enhanced	ART	AMB	SUNSET
CRI	CRI80	CRI80	CRI95	CRI93	CRI90 / CRI95	CRI98	CRI80	CRI90
CCT [K]	2700 / 3000 / 3500 / 4000	BVF / FBS / FZM / FSM / FSH	FAS	AGI 3000 / 3500 / 4000	2700 / 3000 / 3500 / 4000	3000	2200	1800...2700
MacAdam	3	3 / 4 / 4 / 3 / 3	3	3	2	2	3	3

CRI - Color rendering, CCT - Color temperature, MacAdam - Color consistency

Light Distribution



TOLERANCES

Luminous flux tolerances: -/+ 5%

Consumption tolerance: -/+ 5% for TEC | -/+ 10% for TEC & KIT EM | -/+ 10% for ECO-DALI | -/+ 15% for ECO-DALI & KIT EM

BATTERY WARRANTY

TEC EM & ECO EM: 12 months warranty

TEC & ECO: -

MAXIMUM NO. OF LUMINAIRES ON A CIRCUIT

Power	Driver type	Control type	Circuit Breaker Type						
			Amperage	B			C		
				20	16	10	20	16	10
12-14W	Built IN	TEC		62	50	31	104	85	52
17-20W	Built IN	TEC		62	50	31	104	85	52
23-27W	Built IN	TEC		24	20	10	47	40	20
29-35W	Built IN	TEC		24	20	10	47	40	20
42W	Built IN	TEC		20	16	8	38	32	16
12-14W	Built IN	ECO		62	50	31	104	85	52
23-27W	Built IN	ECO		25	21	13	50	42	26
34-42W	Built IN	ECO		17	14	9	34	28	18

RISK GROUP

Standard (CRI80) RG1

FOOD (BVF, FBS, FSM) RG1

FOOD <20W (FZM, FSH) RG2 (dthr=1.8m)

FOOD >20W (FZM, FSH) RG2 (dthr=2.2m)

FAS RG1

AMB2200 RG1

ART RG1

AGI RG1

CRI95 RG1

SUNSET RG1

RG1

The evaluation of photobiological safety is carried out according to the standard IEC 62471:2008 ("Photobiological safety of lamps and lamp systems"). Following the definition of the risk grouping system of the mentioned IEC standard, the LEDs mounted on this family fall into the class "Low Risk (RG1 – No photobiological hazard under normal behavioral limitations)". Under real circumstances (regarding exposure time, pupils, observation distance), it is assumed that there is no endangerment to the eye from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect.

RG2

The evaluation of photobiological safety is carried out according to the standard IEC 62471:2008 ("Photobiological safety of lamps and lamp systems"). Following the definition of the risk grouping system of the mentioned IEC standard, the LEDs mounted on this family fall into the class "Moderate Risk (RG2)". Under real circumstances (regarding exposure time, pupils, observation distance), it is assumed that there is no endangerment to the eye from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect.

SKU SPECIFICATIONS

Product Code	Dimensions (mm)	CCT (K)	Lumens (lm)	Power (W)	Eff. (lm/watt)	Lens Angle (°)
CRI 80						
293000 Tube R31015/2700/14W/80/A15	Ø140 x Ø85 x 104 ± 1mm	2700	1200	14W	86	15°
293001 Tube R31015/3000/14W/80/A15	Ø140 x Ø85 x 104 ± 1mm	3000	1215	14W	87	15°
293002 Tube R31015/3500/14W/80/A15	Ø140 x Ø85 x 104 ± 1mm	3500	1245	14W	89	15°
293003 Tube R31015/4000/14W/80/A15	Ø140 x Ø85 x 104 ± 1mm	4000	1270	14W	91	15°
293004 Tube R31015/2700/14W/80/A24	Ø140 x Ø85 x 104 ± 1mm	2700	1200	14W	86	24°
293005 Tube R31015/3000/14W/80/A24	Ø140 x Ø85 x 104 ± 1mm	3000	1215	14W	87	24°
293006 Tube R31015/3500/14W/80/A24	Ø140 x Ø85 x 104 ± 1mm	3500	1245	14W	89	24°
293007 Tube R31015/4000/14W/80/A24	Ø140 x Ø85 x 104 ± 1mm	4000	1270	14W	91	24°
293008 Tube R31015/2700/14W/80/A45	Ø140 x Ø85 x 104 ± 1mm	2700	1200	14W	86	45°
293009 Tube R31015/3000/14W/80/A45	Ø140 x Ø85 x 104 ± 1mm	3000	1215	14W	87	45°
293010 Tube R31015/3500/14W/80/A45	Ø140 x Ø85 x 104 ± 1mm	3500	1245	14W	89	45°
293011 Tube R31015/4000/14W/80/A45	Ø140 x Ø85 x 104 ± 1mm	4000	1270	14W	91	45°
293012 Tube R31015/2700/14W/80/A55	Ø140 x Ø85 x 104 ± 1mm	2700	1200	14W	86	55°
293013 Tube R31015/3000/14W/80/A55	Ø140 x Ø85 x 104 ± 1mm	3000	1215	14W	87	55°
293014 Tube R31015/3500/14W/80/A55	Ø140 x Ø85 x 104 ± 1mm	3500	1245	14W	89	55°
293015 Tube R31015/4000/14W/80/A55	Ø140 x Ø85 x 104 ± 1mm	4000	1270	14W	91	55°
293016 Tube R31015/2700/20W/80/A15	Ø140 x Ø85 x 104 ± 1mm	2700	1650	20W	83	15°
293017 Tube R31015/3000/20W/80/A15	Ø140 x Ø85 x 104 ± 1mm	3000	1665	20W	84	15°
293018 Tube R31015/3500/20W/80/A15	Ø140 x Ø85 x 104 ± 1mm	3500	1710	20W	86	15°
293019 Tube R31015/4000/20W/80/A15	Ø140 x Ø85 x 104 ± 1mm	4000	1745	20W	88	15°
293020 Tube R31015/2700/20W/80/A24	Ø140 x Ø85 x 104 ± 1mm	2700	1650	20W	83	24°
293021 Tube R31015/3000/20W/80/A24	Ø140 x Ø85 x 104 ± 1mm	3000	1665	20W	84	24°
293022 Tube R31015/3500/20W/80/A24	Ø140 x Ø85 x 104 ± 1mm	3500	1710	20W	86	24°
293023 Tube R31015/4000/20W/80/A24	Ø140 x Ø85 x 104 ± 1mm	4000	1745	20W	88	24°
293024 Tube R31015/2700/20W/80/A45	Ø140 x Ø85 x 104 ± 1mm	2700	1650	20W	83	45°
293025 Tube R31015/3000/20W/80/A45	Ø140 x Ø85 x 104 ± 1mm	3000	1665	20W	84	45°
293026 Tube R31015/3500/20W/80/A45	Ø140 x Ø85 x 104 ± 1mm	3500	1710	20W	86	45°
293027 Tube R31015/4000/20W/80/A45	Ø140 x Ø85 x 104 ± 1mm	4000	1745	20W	88	45°
293028 Tube R31015/2700/20W/80/A55	Ø140 x Ø85 x 104 ± 1mm	2700	1650	20W	83	55°
293029 Tube R31015/3000/20W/80/A55	Ø140 x Ø85 x 104 ± 1mm	3000	1665	20W	84	55°
293030 Tube R31015/3500/20W/80/A55	Ø140 x Ø85 x 104 ± 1mm	3500	1710	20W	86	55°
293031 Tube R31015/4000/20W/80/A55	Ø140 x Ø85 x 104 ± 1mm	4000	1745	20W	88	55°
293032 Tube R31015/AMB2200/14W/80/A15	Ø140 x Ø85 x 104 ± 1mm	AMB2200	915	14W	66	15°
293033 Tube R31015/AMB2200/14W/80/A24	Ø140 x Ø85 x 104 ± 1mm	AMB2200	915	14W	66	24°
293034 Tube R31015/AMB2200/14W/80/A45	Ø140 x Ø85 x 104 ± 1mm	AMB2200	915	14W	66	45°
293035 Tube R31015/AMB2200/14W/80/A55	Ø140 x Ø85 x 104 ± 1mm	AMB2200	915	14W	66	55°
293036 Tube R31015/AMB2200/20W/80/A15	Ø140 x Ø85 x 104 ± 1mm	AMB2200	1270	20W	64	15°
293037 Tube R31015/AMB2200/20W/80/A24	Ø140 x Ø85 x 104 ± 1mm	AMB2200	1270	20W	64	24°
293038 Tube R31015/AMB2200/20W/80/A45	Ø140 x Ø85 x 104 ± 1mm	AMB2200	1270	20W	64	45°
293039 Tube R31015/AMB2200/20W/80/A55	Ø140 x Ø85 x 104 ± 1mm	AMB2200	1270	20W	64	55°
CRI 90						
293072 Tube R31015/SUNSET/21W/90/A15	Ø140 x Ø85 x 104 ± 1mm	SUNSET	1350	21W	65	15°
293073 Tube R31015/SUNSET/21W/90/A24	Ø140 x Ø85 x 104 ± 1mm	SUNSET	1350	21W	65	24°
293074 Tube R31015/SUNSET/21W/90/A45	Ø140 x Ø85 x 104 ± 1mm	SUNSET	1350	21W	65	45°
293075 Tube R31015/SUNSET/21W/90/A55	Ø140 x Ø85 x 104 ± 1mm	SUNSET	1350	21W	65	55°

SKU SPECIFICATIONS

Product Code	Dimensions (mm)	CCT (K)	Lumens (lm)	Power (W)	Eff. (lm/watt)	Lens Angle (°)
CRI 93						
293040 Tube R31015/AGI3000/14W/93/A15	Ø140 x Ø85 x 104 ± 1mm	AGI3000	835	14W	60	15°
293041 Tube R31015/AGI3500/14W/93/A15	Ø140 x Ø85 x 104 ± 1mm	AGI3500	885	14W	64	15°
293042 Tube R31015/AGI4000/14W/93/A15	Ø140 x Ø85 x 104 ± 1mm	AGI4000	940	14W	68	15°
293043 Tube R31015/AGI3000/14W/93/A24	Ø140 x Ø85 x 104 ± 1mm	AGI3000	835	14W	60	24°
293044 Tube R31015/AGI3500/14W/93/A24	Ø140 x Ø85 x 104 ± 1mm	AGI3500	885	14W	64	24°
293045 Tube R31015/AGI4000/14W/93/A24	Ø140 x Ø85 x 104 ± 1mm	AGI4000	940	14W	68	24°
293046 Tube R31015/AGI3000/14W/93/A45	Ø140 x Ø85 x 104 ± 1mm	AGI3000	835	14W	60	45°
293047 Tube R31015/AGI3500/14W/93/A45	Ø140 x Ø85 x 104 ± 1mm	AGI3500	885	14W	64	45°
293048 Tube R31015/AGI4000/14W/93/A45	Ø140 x Ø85 x 104 ± 1mm	AGI4000	940	14W	68	45°
293049 Tube R31015/AGI3000/14W/93/A55	Ø140 x Ø85 x 104 ± 1mm	AGI3000	835	14W	60	55°
293050 Tube R31015/AGI3500/14W/93/A55	Ø140 x Ø85 x 104 ± 1mm	AGI3500	885	14W	64	55°
293051 Tube R31015/AGI4000/14W/93/A55	Ø140 x Ø85 x 104 ± 1mm	AGI4000	940	14W	68	55°
293052 Tube R31015/AGI3000/20W/93/A15	Ø140 x Ø85 x 104 ± 1mm	AGI3000	1080	20W	54	15°
293053 Tube R31015/AGI3500/20W/93/A15	Ø140 x Ø85 x 104 ± 1mm	AGI3500	1145	20W	58	15°
293054 Tube R31015/AGI4000/20W/93/A15	Ø140 x Ø85 x 104 ± 1mm	AGI4000	1220	20W	61	15°
293055 Tube R31015/AGI3000/20W/93/A24	Ø140 x Ø85 x 104 ± 1mm	AGI3000	1080	20W	54	24°
293056 Tube R31015/AGI3500/20W/93/A24	Ø140 x Ø85 x 104 ± 1mm	AGI3500	1145	20W	58	24°
293057 Tube R31015/AGI4000/20W/93/A24	Ø140 x Ø85 x 104 ± 1mm	AGI4000	1220	20W	61	24°
293058 Tube R31015/AGI3000/20W/93/A45	Ø140 x Ø85 x 104 ± 1mm	AGI3000	1080	20W	54	45°
293059 Tube R31015/AGI3500/20W/93/A45	Ø140 x Ø85 x 104 ± 1mm	AGI3500	1145	20W	58	45°
293060 Tube R31015/AGI4000/20W/93/A45	Ø140 x Ø85 x 104 ± 1mm	AGI4000	1220	20W	61	45°
293061 Tube R31015/AGI3000/20W/93/A55	Ø140 x Ø85 x 104 ± 1mm	AGI3000	1080	20W	54	55°
293062 Tube R31015/AGI3500/20W/93/A55	Ø140 x Ø85 x 104 ± 1mm	AGI3500	1145	20W	58	55°
293063 Tube R31015/AGI4000/20W/93/A55	Ø140 x Ø85 x 104 ± 1mm	AGI4000	1220	20W	61	55°
CRI 95						
293064 Tube R31015/FAS/14W/95/A15	Ø140 x Ø85 x 104 ± 1mm	FAS	1045	14W	75	15°
293065 Tube R31015/FAS/14W/95/A24	Ø140 x Ø85 x 104 ± 1mm	FAS	1045	14W	75	24°
293066 Tube R31015/FAS/14W/95/A45	Ø140 x Ø85 x 104 ± 1mm	FAS	1045	14W	75	45°
293067 Tube R31015/FAS/14W/95/A55	Ø140 x Ø85 x 104 ± 1mm	FAS	1045	14W	75	55°
293068 Tube R31015/FAS/20W/95/A15	Ø140 x Ø85 x 104 ± 1mm	FAS	1430	20W	72	15°
293069 Tube R31015/FAS/20W/95/A24	Ø140 x Ø85 x 104 ± 1mm	FAS	1430	20W	72	24°
293070 Tube R31015/FAS/20W/95/A45	Ø140 x Ø85 x 104 ± 1mm	FAS	1430	20W	72	45°
293071 Tube R31015/FAS/20W/95/A55	Ø140 x Ø85 x 104 ± 1mm	FAS	1430	20W	72	55°