

## Liwa

### DAMP-PROOF | ECO-DALI SERIES

Liwa is a high-impact resistance luminaire suitable for very wet or for very cold environments such as freeze warehouses. Its adjustable beam angle (30/60/90 degrees) makes it suitable for very tall warehouses where the beam can be adjusted to shine the light precisely on the shelves. With an IP68 protection factor.

Liwa damp-proof luminaires come in several series, with various add-on and controls:

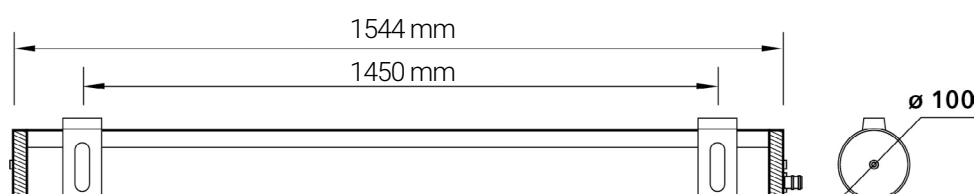
- Liwa TEC – the standard for any project in the retail sectors
- Liwa ECO-DALI– with DALI controls for dimming

### FEATURES & BENEFITS

- CRI 80 as standard
- 4 color temperatures: 3000K, 4000K, 5000K and 6500K
- Long rated life – L90/B10 at 50,000h
- High luminaire efficiency: 157 lm/W @4000K

### APPLICATION

Grocery & Supermarket | Industrial & Logistic | Parking



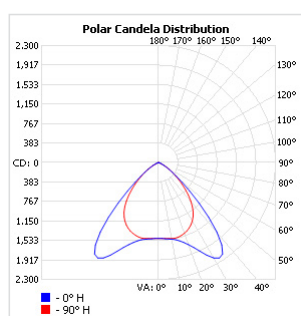
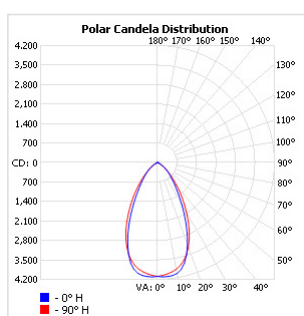
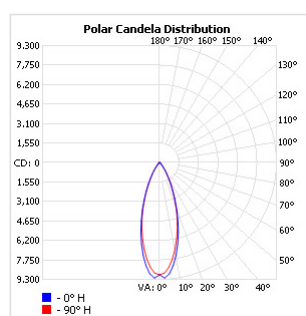
## SPECIFICATIONS

Power consumption	33W, 42W, 51W, 60W
Dimensions	Ø100 x 1544± 1mm
Weight	4.0 - 4.1Kg
Housing materials	Polycarbonate & Stainless stell
IK code	IK10
THD (at 230V, 50Hz, Full load)	<9%
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 [°]	30°, 60°, 90°
Lifespan [h]	50,000
Housing color	○ white
Lumen maintenance	L90/B10@50.000h at 25°C
IP factor	IP68
Control optional	<b>ECO-DALI</b>
Warranty [years]	5
Storage temperature range [°C]	-20...+55°C / -4F ... +131F
Emergency option	-

Light application	Standard
CRI	CRI 80
CCT [K]	3000K/4000K/5000K/6500K
MacAdam	4

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

## LIGHT DISTRIBUTION



**RISK GROUP****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.

**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
< 50W		TEC	37	30	18	62	51	31	
≥ 50W		TEC	37	30	18	62	51	31	
< 80W		ECO	27	21	13	45	35	21	

## SKU SPECIFICATIONS

Product Code	Dimensions (mm)	CCT (K)	Lumens (lm)	Power (W)	Eff. (lm/watt)	Lens Angle (°)
<b>CRI 80</b>						
229000 Liwa 150/3000/33W/80/A30	Ø100 x 1544± 1mm	3000	4715	33W	143	30°
229001 Liwa 150/4000/33W/80/A30	Ø100 x 1544± 1mm	4000	4915	33W	149	30°
229002 Liwa 150/5000/33W/80/A30	Ø100 x 1544± 1mm	5000	5045	33W	153	30°
229003 Liwa 150/6500/33W/80/A30	Ø100 x 1544± 1mm	6500	4915	33W	149	30°
229004 Liwa 150/3000/33W/80/A60	Ø100 x 1544± 1mm	3000	4680	33W	142	60°
229005 Liwa 150/4000/33W/80/A60	Ø100 x 1544± 1mm	4000	4875	33W	148	60°
229006 Liwa 150/5000/33W/80/A60	Ø100 x 1544± 1mm	5000	5010	33W	152	60°
229007 Liwa 150/6500/33W/80/A60	Ø100 x 1544± 1mm	6500	4875	33W	148	60°
229008 Liwa 150/3000/33W/80/A90	Ø100 x 1544± 1mm	3000	4700	33W	143	90°
229009 Liwa 150/4000/33W/80/A90	Ø100 x 1544± 1mm	4000	4900	33W	149	90°
229010 Liwa 150/5000/33W/80/A90	Ø100 x 1544± 1mm	5000	5030	33W	153	90°
229011 Liwa 150/6500/33W/80/A90	Ø100 x 1544± 1mm	6500	4900	33W	149	90°
229012 Liwa 150/3000/42W/80/A30	Ø100 x 1544± 1mm	3000	6285	42W	150	30°
229013 Liwa 150/4000/42W/80/A30	Ø100 x 1544± 1mm	4000	6555	42W	157	30°
229014 Liwa 150/5000/42W/80/A30	Ø100 x 1544± 1mm	5000	6730	42W	161	30°
229015 Liwa 150/6500/42W/80/A30	Ø100 x 1544± 1mm	6500	6555	42W	157	30°
229016 Liwa 150/3000/42W/80/A60	Ø100 x 1544± 1mm	3000	6240	42W	149	60°
229017 Liwa 150/4000/42W/80/A60	Ø100 x 1544± 1mm	4000	6505	42W	155	60°
229018 Liwa 150/5000/42W/80/A60	Ø100 x 1544± 1mm	5000	6680	42W	160	60°
229019 Liwa 150/6500/42W/80/A60	Ø100 x 1544± 1mm	6500	6505	42W	155	60°
229020 Liwa 150/3000/42W/80/A90	Ø100 x 1544± 1mm	3000	6270	42W	150	90°
229021 Liwa 150/4000/42W/80/A90	Ø100 x 1544± 1mm	4000	6535	42W	156	90°
229022 Liwa 150/5000/42W/80/A90	Ø100 x 1544± 1mm	5000	6710	42W	160	90°
229023 Liwa 150/6500/42W/80/A90	Ø100 x 1544± 1mm	6500	6535	42W	156	90°
229024 Liwa 150/3000/51W/80/A30	Ø100 x 1544± 1mm	3000	7400	51W	146	30°
229025 Liwa 150/4000/51W/80/A30	Ø100 x 1544± 1mm	4000	7710	51W	152	30°
229026 Liwa 150/5000/51W/80/A30	Ø100 x 1544± 1mm	5000	7920	51W	156	30°
229027 Liwa 150/6500/51W/80/A30	Ø100 x 1544± 1mm	6500	7710	51W	152	30°
229028 Liwa 150/3000/51W/80/A60	Ø100 x 1544± 1mm	3000	7345	51W	145	60°
229029 Liwa 150/4000/51W/80/A60	Ø100 x 1544± 1mm	4000	7655	51W	151	60°
229030 Liwa 150/5000/51W/80/A60	Ø100 x 1544± 1mm	5000	7860	51W	155	60°
229031 Liwa 150/6500/51W/80/A60	Ø100 x 1544± 1mm	6500	7655	51W	151	60°
229032 Liwa 150/3000/51W/80/A90	Ø100 x 1544± 1mm	3000	7380	51W	145	90°
229033 Liwa 150/4000/51W/80/A90	Ø100 x 1544± 1mm	4000	7690	51W	151	90°
229034 Liwa 150/5000/51W/80/A90	Ø100 x 1544± 1mm	5000	7895	51W	155	90°
229035 Liwa 150/6500/51W/80/A90	Ø100 x 1544± 1mm	6500	7690	51W	151	90°
229036 Liwa 150/3000/60W/80/A30	Ø100 x 1544± 1mm	3000	8220	60W	137	30°
229037 Liwa 150/4000/60W/80/A30	Ø100 x 1544± 1mm	4000	8570	60W	143	30°
229038 Liwa 150/5000/60W/80/A30	Ø100 x 1544± 1mm	5000	8800	60W	147	30°
229039 Liwa 150/6500/60W/80/A30	Ø100 x 1544± 1mm	6500	8570	60W	143	30°
229040 Liwa 150/3000/60W/80/A60	Ø100 x 1544± 1mm	3000	8160	60W	136	60°
229041 Liwa 150/4000/60W/80/A60	Ø100 x 1544± 1mm	4000	8510	60W	142	60°
229042 Liwa 150/5000/60W/80/A60	Ø100 x 1544± 1mm	5000	8735	60W	146	60°
229043 Liwa 150/6500/60W/80/A60	Ø100 x 1544± 1mm	6500	8510	60W	142	60°
229044 Liwa 150/3000/60W/80/A90	Ø100 x 1544± 1mm	3000	8200	60W	137	90°
229045 Liwa 150/4000/60W/80/A90	Ø100 x 1544± 1mm	4000	8545	60W	143	90°
229046 Liwa 150/5000/60W/80/A90	Ø100 x 1544± 1mm	5000	8775	60W	147	90°
229047 Liwa 150/6500/60W/80/A90	Ø100 x 1544± 1mm	6500	8545	60W	143	90°
229288 Liwa 150/3000/33W/80/A30/DSPC	Ø100 x 1544± 1mm	3000	4715	33W	143	30°
229289 Liwa 150/4000/33W/80/A30/DSPC	Ø100 x 1544± 1mm	4000	4915	33W	149	30°

## SKU SPECIFICATIONS

Product Code	Dimensions (mm)	CCT (K)	Lumens (lm)	Power (W)	Eff. (lm/watt)	Lens Angle (°)
<b>CRI 80</b>						
229290 Liwa 150/5000/33W/80/A30/DSPC	Ø100 x 1544± 1mm	5000	5045	33W	153	30°
229291 Liwa 150/6500/33W/80/A30/DSPC	Ø100 x 1544± 1mm	6500	4915	33W	149	30°
229292 Liwa 150/3000/33W/80/A60/DSPC	Ø100 x 1544± 1mm	3000	4680	33W	142	60°
229293 Liwa 150/4000/33W/80/A60/DSPC	Ø100 x 1544± 1mm	4000	4875	33W	148	60°
229294 Liwa 150/5000/33W/80/A60/DSPC	Ø100 x 1544± 1mm	5000	5010	33W	152	60°
229295 Liwa 150/6500/33W/80/A60/DSPC	Ø100 x 1544± 1mm	6500	4875	33W	148	60°
229296 Liwa 150/3000/33W/80/A90/DSPC	Ø100 x 1544± 1mm	3000	4700	33W	143	90°
229297 Liwa 150/4000/33W/80/A90/DSPC	Ø100 x 1544± 1mm	4000	4900	33W	149	90°
229298 Liwa 150/5000/33W/80/A90/DSPC	Ø100 x 1544± 1mm	5000	5030	33W	153	90°
229299 Liwa 150/6500/33W/80/A90/DSPC	Ø100 x 1544± 1mm	6500	4900	33W	149	90°
229300 Liwa 150/3000/42W/80/A30/DSPC	Ø100 x 1544± 1mm	3000	6285	42W	150	30°
229301 Liwa 150/4000/42W/80/A30/DSPC	Ø100 x 1544± 1mm	4000	6555	42W	157	30°
229302 Liwa 150/5000/42W/80/A30/DSPC	Ø100 x 1544± 1mm	5000	6730	42W	161	30°
229303 Liwa 150/6500/42W/80/A30/DSPC	Ø100 x 1544± 1mm	6500	6555	42W	157	30°
229304 Liwa 150/3000/42W/80/A60/DSPC	Ø100 x 1544± 1mm	3000	6240	42W	149	60°
229305 Liwa 150/4000/42W/80/A60/DSPC	Ø100 x 1544± 1mm	4000	6505	42W	155	60°
229306 Liwa 150/5000/42W/80/A60/DSPC	Ø100 x 1544± 1mm	5000	6680	42W	160	60°
229307 Liwa 150/6500/42W/80/A60/DSPC	Ø100 x 1544± 1mm	6500	6505	42W	155	60°
229308 Liwa 150/3000/42W/80/A90/DSPC	Ø100 x 1544± 1mm	3000	6270	42W	150	90°
229309 Liwa 150/4000/42W/80/A90/DSPC	Ø100 x 1544± 1mm	4000	6535	42W	156	90°
229310 Liwa 150/5000/42W/80/A90/DSPC	Ø100 x 1544± 1mm	5000	6710	42W	160	90°
229311 Liwa 150/6500/42W/80/A90/DSPC	Ø100 x 1544± 1mm	6500	6535	42W	156	90°
229312 Liwa 150/3000/51W/80/A30/DSPC	Ø100 x 1544± 1mm	3000	7400	51W	146	30°
229313 Liwa 150/4000/51W/80/A30/DSPC	Ø100 x 1544± 1mm	4000	7710	51W	152	30°
229314 Liwa 150/5000/51W/80/A30/DSPC	Ø100 x 1544± 1mm	5000	7920	51W	156	30°
229315 Liwa 150/6500/51W/80/A30/DSPC	Ø100 x 1544± 1mm	6500	7710	51W	152	30°
229316 Liwa 150/3000/51W/80/A60/DSPC	Ø100 x 1544± 1mm	3000	7345	51W	145	60°
229317 Liwa 150/4000/51W/80/A60/DSPC	Ø100 x 1544± 1mm	4000	7655	51W	151	60°
229318 Liwa 150/5000/51W/80/A60/DSPC	Ø100 x 1544± 1mm	5000	7860	51W	155	60°
229319 Liwa 150/6500/51W/80/A60/DSPC	Ø100 x 1544± 1mm	6500	7655	51W	151	60°
229320 Liwa 150/3000/51W/80/A90/DSPC	Ø100 x 1544± 1mm	3000	7380	51W	145	90°
229321 Liwa 150/4000/51W/80/A90/DSPC	Ø100 x 1544± 1mm	4000	7690	51W	151	90°
229322 Liwa 150/5000/51W/80/A90/DSPC	Ø100 x 1544± 1mm	5000	7895	51W	155	90°
229323 Liwa 150/6500/51W/80/A90/DSPC	Ø100 x 1544± 1mm	6500	7690	51W	151	90°
229324 Liwa 150/3000/60W/80/A30/DSPC	Ø100 x 1544± 1mm	3000	8220	60W	137	30°
229325 Liwa 150/4000/60W/80/A30/DSPC	Ø100 x 1544± 1mm	4000	8570	60W	143	30°
229326 Liwa 150/5000/60W/80/A30/DSPC	Ø100 x 1544± 1mm	5000	8800	60W	147	30°
229327 Liwa 150/6500/60W/80/A30/DSPC	Ø100 x 1544± 1mm	6500	8570	60W	143	30°
229328 Liwa 150/3000/60W/80/A60/DSPC	Ø100 x 1544± 1mm	3000	8160	60W	136	60°
229329 Liwa 150/4000/60W/80/A60/DSPC	Ø100 x 1544± 1mm	4000	8510	60W	142	60°
229330 Liwa 150/5000/60W/80/A60/DSPC	Ø100 x 1544± 1mm	5000	8735	60W	146	60°
229331 Liwa 150/6500/60W/80/A60/DSPC	Ø100 x 1544± 1mm	6500	8510	60W	142	60°
229332 Liwa 150/3000/60W/80/A90/DSPC	Ø100 x 1544± 1mm	3000	8200	60W	137	90°
229333 Liwa 150/4000/60W/80/A90/DSPC	Ø100 x 1544± 1mm	4000	8545	60W	143	90°
229334 Liwa 150/5000/60W/80/A90/DSPC	Ø100 x 1544± 1mm	5000	8775	60W	147	90°
229335 Liwa 150/6500/60W/80/A90/DSPC	Ø100 x 1544± 1mm	6500	8545	60W	143	90°

Technical specifications can be modified without prior notice. All information is property of Greentek Lighting.

The presentation picture is for information purposes only. Latest document update: May 9, 2018 11:09 AM. [www.greentek.eu](http://www.greentek.eu)