

SQL-30 / RTL-30

Multiplex LED Module, SQL-30 and RTL-30-Series

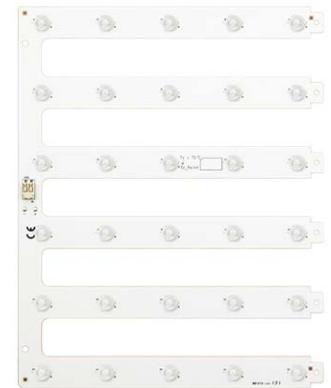
freedom in lighting

700 mA, 15 V

- High efficacy, up to 131 lm/W
- Optical Distance \geq 45 mm
- Accurate colour matching (SDCM), MacAdam 3-step
- Easy connection with push-in connectors
- Long lifetime



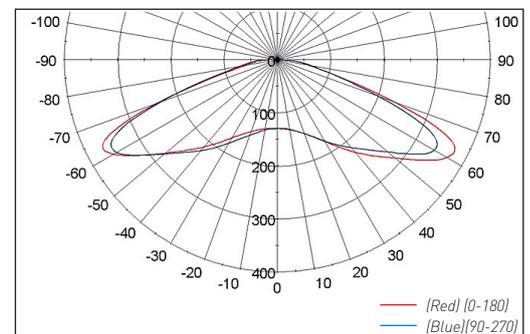
SQL-30



RTL-30



	Colour (K)	Luminous flux Φ_v (lm)			Efficacy (lm/W)	CRI (Ra)	CCT (K)			
		Min.	Nom.	Max			Min.	Nom.	Max	
SQL-30	SQL-30-830-015	3000	1135	1270	1406	119	> 80	2834	2950	3071
	SQL-30-835-015	3500	1155	1290	1431	120	> 80	3174	3321	3470
	SQL-30-840-015	4000	1194	1360	1480	127	> 80	3720	3913	4123
	SQL-30-850-015	5000	1234	1400	1529	131	> 80	4631	4925	5251
	SQL-30-865-015	6500	1155	1300	1431	121	> 80	5978	6387	6857
RTL-30	RTL-30-830-015	3000	1135	1270	1406	119	> 80	2834	2950	3071
	RTL-30-835-015	3500	1155	1290	1431	120	> 80	3174	3321	3470
	RTL-30-840-015	4000	1194	1360	1480	127	> 80	3720	3913	4123
	RTL-30-850-015	5000	1234	1400	1529	131	> 80	4631	4925	5251
	RTL-30-865-015	6500	1155	1300	1431	121	> 80	5978	6387	6857



Polar Intensity Diagram : Beam Angle $145 \pm 5\%$

Note: All values with nominal operating voltage and current at $T_C = 35\text{ }^\circ\text{C}$

Electrical specifications

at 700mA, $T_c = 35\text{ }^\circ\text{C}$	Min.	Nom.	Max
Operating Current (mA)	-	700	900
Operating Voltage (V)	14.0	15.3	17.0
Power Consumption (W)	-	10.7	-

Colour consistency

Colour consistency at initial time	3 MacAdam steps (~4000K)
	4 MacAdam steps (5000K~)

Operating Conditions and Characteristics

Max.temperature at tc point	75 °C
Operating temperature range	-20...+50 °C
Humidity	See application note
Storage temperature range	-40...+80 °C
Life time (L70B50)	50 000h, at $T_C = 75\text{ }^\circ\text{C}$

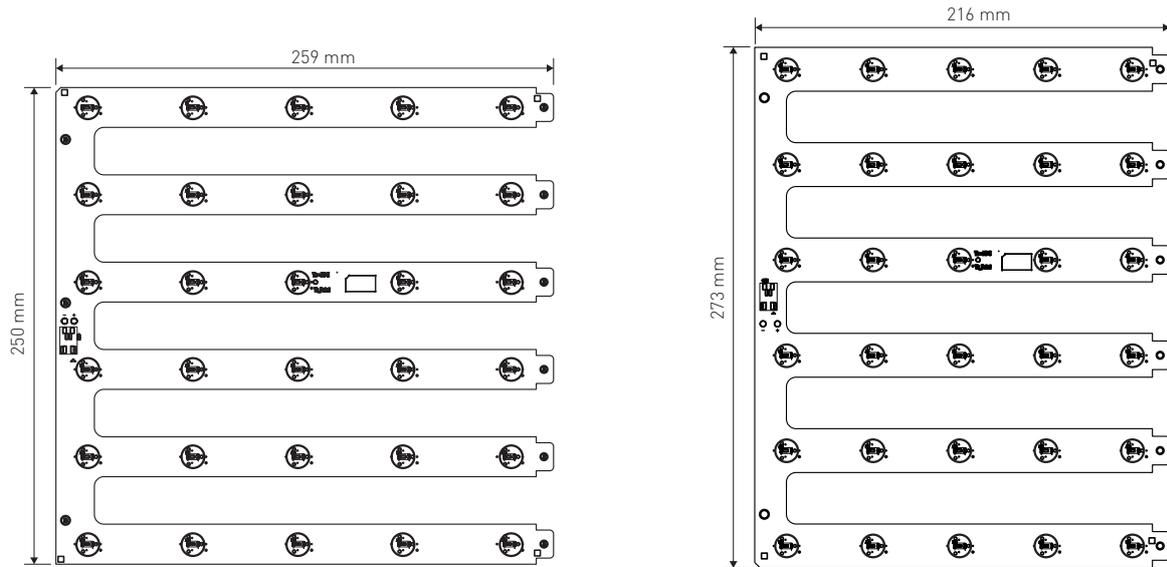
Connections and Mechanical Data

Wire size	0.2 - 0.8 mm ²
Wire strip length	6 - 7 mm
Wire type	solid core and fine-stranded
Weight	105 g \pm 0.9 g (SQL-30) 97 g \pm 0.9 g (RTL-30)
PCB material	CEM-1

Conformity & Standards

Photobiological safety of lamps and lamp systems	IEC62471
Led modules for general lighting - safety specifications	IEC 62031:2008

Compliant with relevant EU directives, CE marked, ROHS compliant



	SQ-30	RT-30
Length of PCB	259.0 ± 0.5 mm	216.0 ± 0.5 mm
Width of PCB	250.0 ± 0.5 mm	273.0 ± 0.5 mm
Thickness of PCB	1.6 ± 0.1 mm	1.6 ± 0.1 mm
Height of PCBA	6.6 ± 0.2 mm	6.6 ± 0.2 mm

Packing details	1 Box =MOQ	1 Pallet
Num. of modules	60	SQ: 1800 (30 boxes) RT: 2400 (40 boxes)

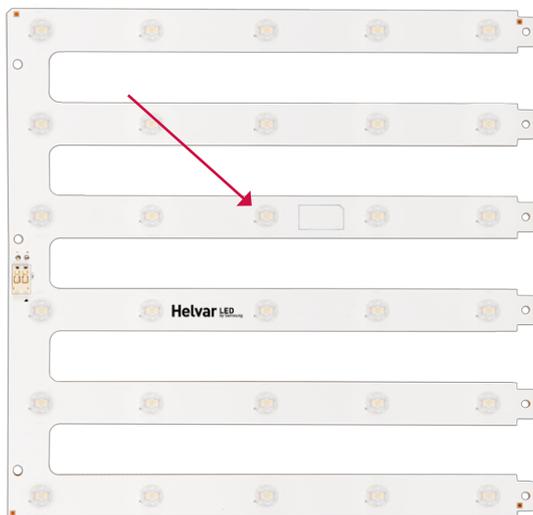
Box : SQ-30: 365 (L) x 332 (W) x 295 (h) [mm]
RT-30: 375 (L) x 280 (W) x 295 (h) [mm]

Relative light output versus drive current at Tc = 25 °C

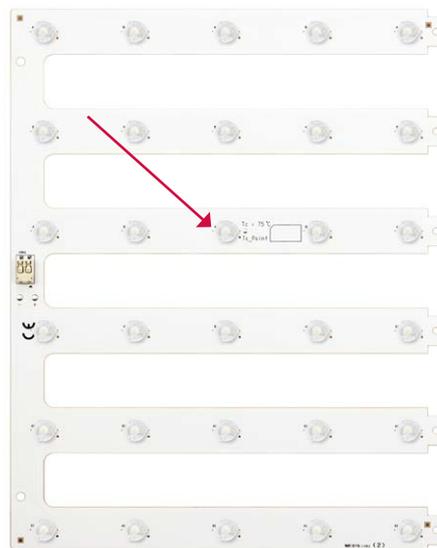
I _{fv} (mA)	350	400	450	500	550	600	650	700	750	800	850	900
Φ _v Rel.	53 %	59 %	66 %	73 %	80 %	87 %	93 %	100 %	107 %	113 %	120 %	126 %

Thermal Management

Tc Point : See the below red mark.



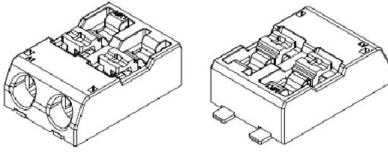
SQ-30



RT-30

Connector

Connector: Push-in type



Wire size: 0.2 - 0.8 mm² (AWG 24-18)

Wire strip length 6 - 7 mm

(1) Insert solid conductors via push-in termination.

(2) Insert or remove fine-stranded conductors by lightly pressing on push-button.

Precautions In Handling

- 1) Please note that the colour of the specified LED module can be different when applying external diffuser products.
- 2) Handling
 - Handle the LED module with care and avoid dropping.
 - Always store LED modules in a dust free environment.
 - Do not tempt to disassemble any of the components on the LED module
- 3) Cleaning
 - The LED Modules should avoid contact with any type of fluid such as oil, organic solvents
 - It is recommended that IPA(Isopropyl Alcohol) is used as a solvent for cleaning the LED modules.
 - When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the resin or not.
 - Freon solvents should not be used to clean the LED modules due to worldwide restrictions. Do not clean the LED modules through ultrasonic methods.
 - Before cleaning, a pre-test should be done to confirm whether any damage to the LED lighting performance will occur. If in doubt please, then always contact your supplier.
- 4) Static Electricity
 - Static electricity or surge voltage can damage LED light sources. Always wear anti-ESD wrist band or anti-electrostatic glove when handling LED components.
- 5) Discoloration
 - VOCs (volatile organic compounds) may be occurred by adhesives, flux, hardener or organic additives which is used in luminaires (fixture) and LED silicone bags are permeable to it.
 - It may lead a discoloration when LED expose to heat or light.
 - This phenomenon can give a significant loss of light emitted (output) from the luminaires(fixture).
 - In order to prevent these problems, we recommend you to verify the physical properties of the materials used in the luminaires and select your materials carefully.
- 6) Risk of Sulfurization (or Tarnishing)
 - The lead frame from Samsung Electronics is a plated package and it may change to black (or dark colour) when it is exposed to Ag (a), Sulphur (S), Chlorine (Cl) or other halogen compound. It requires attention.
 - Sulphide (Sulfurization) of the lead frame may cause a change of degradation intensity, chromaticity coordinates and it may cause open circuit in extreme cases. It requires attention.
 - Sulphide (Sulfurization) of the lead frame may cause of storage and using with oxidizing substances together. Therefore, LED is not recommend to use and store with the below list.
 - : Rubber, Plain paper, lead solder cream etc.
- 7) Others
 - If over-voltage exceeds the absolute maximum rating of the LED module, then it can cause permanent damage and result in destruction.
 - Never look directly into an operational LED module without suitable protective eye wear.