

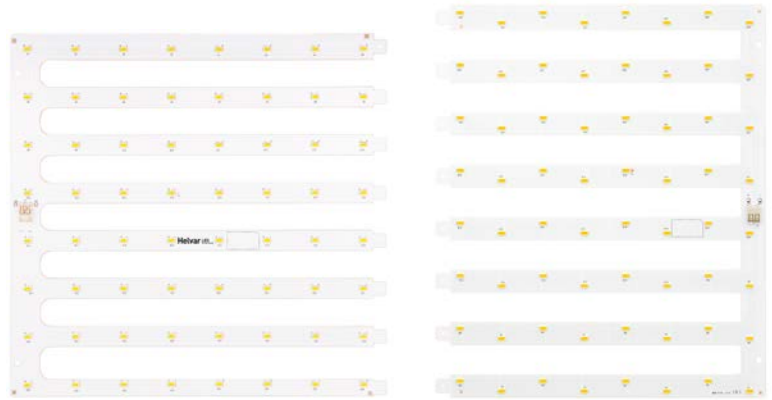
SQ-64 / RT-64

Multiplex LED Module, SQ-64 and RT-64-Series

freedom in lighting

700 mA, 12 V

- High efficacy, up to 162 lm/W
- Optical Distance ≥ 45 mm
- Accurate colour matching (SDCM), MacAdam 3-step
- Easy connection with push-in connectors
- Long lifetime

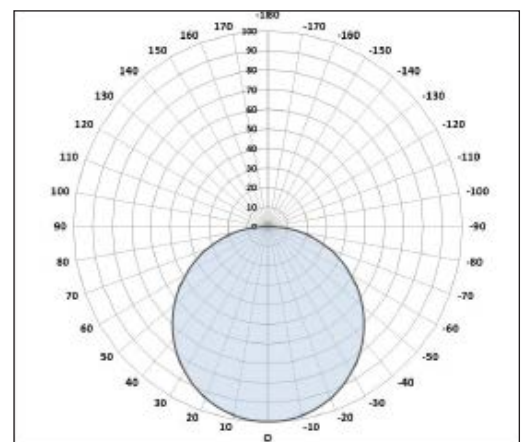


SQ-64

RT-64



	Colour (K)	Luminous flux Φ_v (lm)			Efficacy (lm/W)	CRI		
		Min.	Nom.	Max		Min. (Ra)	Typ. (Ra)	
SQ-64	SQ-64-830-011	3000	1080	1210	1340	149	> 80	83
	SQ-64-835-011	3500	1100	1230	1360	152	> 80	83
	SQ-64-840-011	4000	1180	1310	1380	162	> 80	83
	SQ-64-850-011	5000	1180	1310	1450	162	> 80	83
	SQ-64-865-011	6500	1140	1270	1410	157	> 80	83
RT-64	RT-64-830-011	3000	1080	1210	1340	149	> 80	83
	RT-64-835-011	3500	1100	1230	1360	152	> 80	83
	RT-64-840-011	4000	1180	1310	1380	162	> 80	83
	RT-64-850-011	5000	1180	1310	1450	162	> 80	83
	RT-64-865-011	6500	1140	1270	1410	157	> 80	83



Polar Intensity Diagram : Beam Angle $115 \pm 5\%$

Note: All values with nominal operating voltage and current at $TC = 35^\circ C$

Electrical specifications

at 700mA, $T_c = 35^\circ C$	Min.	Nom.	Max
Operating Current (mA)	-	700	1600
Operating Voltage (V)	10.5	11.5	12.5
Power Consumption (W)	-	8.1	-

Colour consistency

Colour consistency at initial time 3 MacAdam steps

Operating Conditions and Characteristics

Max.temperature at tc point	65 °C
Operating temperature range	-20...+60 °C
Humidity	See application note
Storage temperature range	-35...+85 °C
Life time (L70B50)	50 000h, at $TC=65^\circ C$

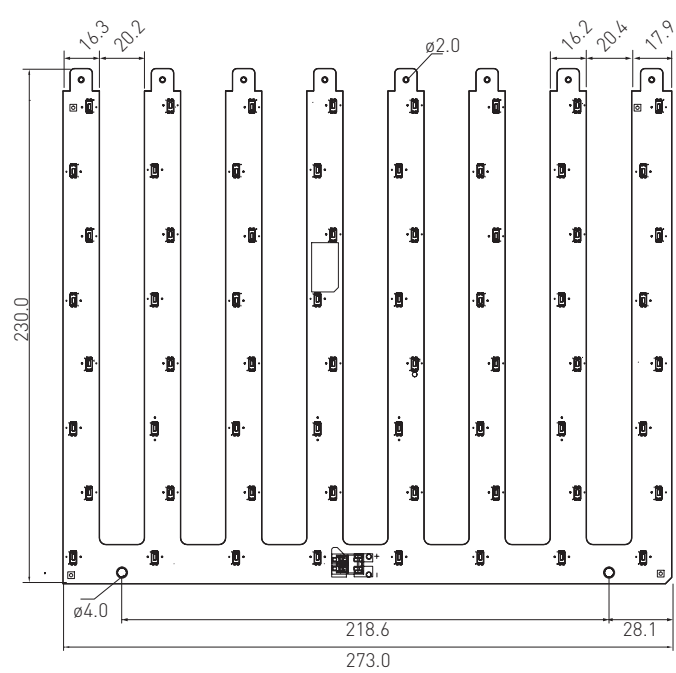
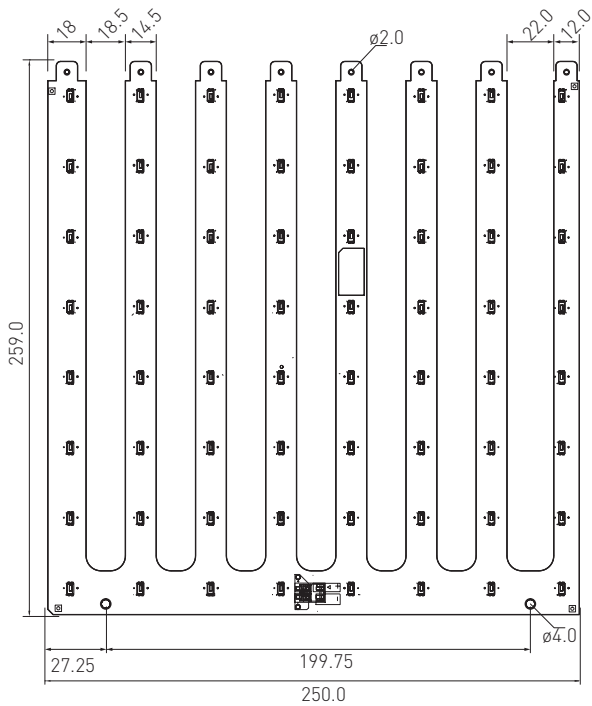
Connections and Mechanical Data

Wire size	0.2 - 0.8 mm ²
Wire strip length	6 - 7 mm
Wire type	solid core and fine-stranded
Weight	88 g \pm 0.9 g
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-64	RT-64
Length of PCB	257.0 ± 0.5 mm	230.0 ± 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	5.95 ± 0.2 mm	5.95 ± 0.2 mm

Packing details	1 Tray	1 Box	1 Pallet
Num. of modules	1	60	1080 (18 boxes)

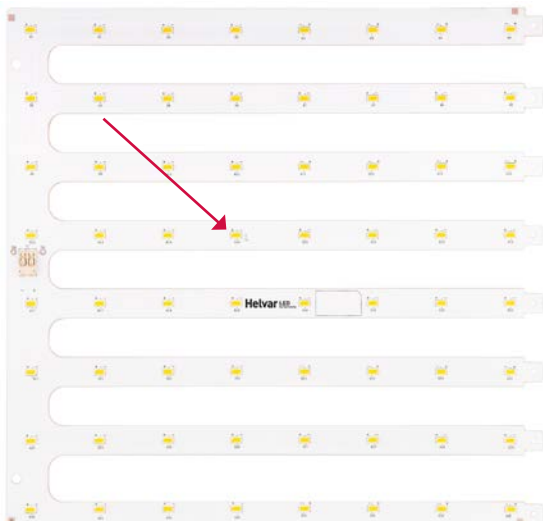
Box : 365 (L) x 332 (W) x 267 (h) [mm]

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

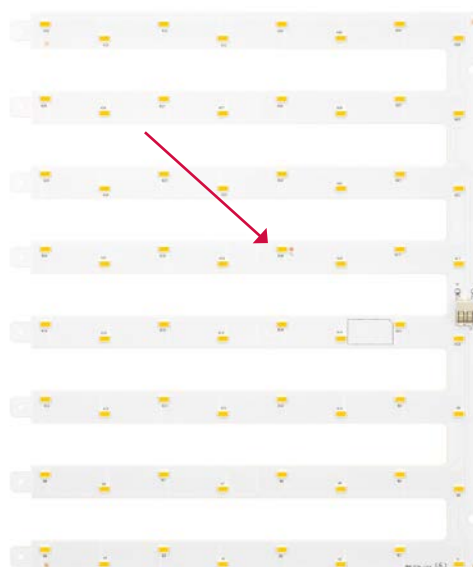
I _{fv} (mA)	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
Φv Rel.	45 %	59 %	73 %	87 %	100 %	113 %	126 %	139 %	152 %	165 %	178 %	190 %	203 %	216 %

Thermal Management

Tc Point : See the below red mark.



SQ-64



RT-64

SQ-64 / RT-64

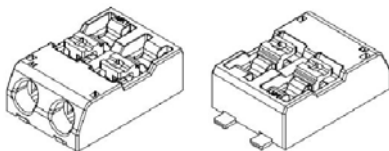
Note: all values with nominal operating voltage and current at TC=35 °C

3000 K	3500 K	4000 K	5000 K
x 0.4266 0.4389 0.4466 0.4338 y 0.3912 0.3954 0.4113 0.4068	x 0.4007 0.4138 0.4205 0.4068 y 0.3789 0.3862 0.4028 0.3961	x 0.3758 0.3888 0.3934 0.3799 y 0.3668 0.3747 0.3906 0.3823	x 0.3387 0.3527 0.3547 0.3398 y 0.3391 0.3503 0.3685 0.3564

6500 K
x 0.3098 0.3214 0.3202 0.3079 y 0.3167 0.3280 0.3397 0.3275

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.

- 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.