

# SCIOLUX<sup>®</sup> Max Efficacy LED Modules SCMLLHE family

Powered by:

SCMLLHE family are LED modules based on the CREE LED<sup>®</sup> J\_Series<sup>®</sup> J5050 optimized for cost effective and high efficacy applications. SCMLL modules are compatible with third party optics from LEDIL<sup>®</sup> STRADA-IP-2x6 / STRADA-IP-24 families, providing optimized and easy integration, with excellent quality, reliability and precision.

- High efficacy **211lm/W** and up to **10,789lm**.
- Excellent LED color over angle consistency.
- LM-80 lifetime projections (IEC 62717) > 100,000 (L70B10)\*
- Chromatic Deviation Δu'v' < 0.003 @ 18K hr
- Unique and flexible form factor configuration.
- MPCB thermal conductivity 2 W/m.k based in UHT (Ultra High Thermal), Lead Free HASL, RoHS.





### **Product Selection**

Table 1. SCHILLHEIZ PEHOHIMANCE at SOUTHA, $TC = 25$ C	Table 1. SCMLLHE12	performance a	at 800mA,	Tc =	25°C
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Order Code	CCT (K)	CRI	Min. Flux (lm)	Typ. Flux (lm)	Typ. Efficacy (Im/W)	Typ. Power (W)	Max. Flux** (Im)
SCMLLHE12-J5E-740-36	4000K ≤ 3SDCM	≥ 70	5,264	5,605	211	26.5	9,538

Notes: Luminous flux and power tolerances  $\pm 7\%$  chromaticity  $\pm 2\%$ 

#### Table 2. SCMLLHE24 performance at 1,200mA, $Tc = 25^{\circ}C$

Order Code	CCT (K)	CRI	Min. Flux (lm)	Typ. Flux (lm)	Typ. Efficacy (Im/W)	Typ. Power (W)	Max. Flux** (Im)
SCMLLHE24-J5E-740-48	4000K ≤ 3SDCM	≥ 70	10,527	10,789	203	52.7	19,076

Notes: Luminous flux and power tolerances  $\pm7\%$  chromaticity  $\pm2\%$ 

\* LED: J Series® 5050 lifetime projections are for informational purposes only and are not a warranty or a specification.

\*\* Maximum flux values are calculated for for reference only; DC Maximum Forward Current at Tc = 85°C.



### **Electrical Characteristics** (T<sub>c</sub> = 25°C)

	DC Forward Current (If)			Operating Case		
Family	Typical (mA)	Maximum (mA)	Minimum (V)	Typical (V)	Maximum (V)	Temperature (T <sub>c</sub> )
SCMLLHE12-J5E-740-36	800	1,800	31.6	33.8	36.3	-40°C to 85°C
SCMLLHE24-J5E-740-48	1,200	2,700	42.1	45.0	48.5	-40°C to 85°C

### Mechanical Dimensions (mm)



Figure 1. Mechanical dimension for SCMLLHE12 family



Figure 2. Mechanical dimension for SCMLLHE24 family

Notes:

- ▶ ESD withstand voltaje (JEDEC JS-001-2012) : Class 2
- Recommended Wire : 18 24 AWB
- SCMLLHE12 recommended mounting screw: M3 0.5 x 0.6 mm

SCMLLHE24 recommended mounting screw: Countersunk M3 – 0.56 x 0.6 mm







### Efficacy Characteristics (Tc = 25°C)



Figure 3. Typical efficacy for — SCMLLHE12 family and — SCMLLHE24 family, performance  $\geq$  70CRI at T<sub>c</sub> = 25°C

### **Packaging Information**

Table 3. Packaging information for SCMLLHE family.

Order Code	Quantity per Tray	Tray Quantity per Box	Standard Package Quantity, SPQ	Box Dimension (mm)	Box Weight (kg)
SCMLLHE12-J5E-xxx-36	120	2	240	37.5 x 28 x 32	4.46
SCMLLHE24–J5E–xxx–48	120	2	240	37.5 x 28 x 32	4.46

WARNING: Do not look at an exposed module in operation; eye injury can result. The Module is intended for use in dry locations only. When washing is required, IPA is recommended; the use of water, oil and other solvents may react and damage module. It is recommended to handle Module with anti-electrostatic glove or wrist band because LEDs are sensitive to static electricity. Risk of discoloration, intensity degradation or chromaticity shift is possible when Module is exposed to VOC from common materials used in luminaries assembly which could be not chemical compatible with LED source, attention must be taken to select carefully these materials; for more information please reference <u>Cree LED Chemical Compatibility</u>

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### **Performance Characteristics**



#### Table 4. SCMLLHE12-J5E-740-36

CCT (K)	CRI	Tc (°C)	I <sub>F</sub> (mA)	Flux (lm)	Efficacy (Im/W)	Power (W)
3896	71.6	24.5	800	5,604.93	210.51	26.20
4000 70	25*	700*	4,941	215	23	
		1,050*	7,224	204	35	
	55*	700*	4,769	209	23	
		1,050*	6,973	198	35	
	85*	700*	4,598	203	23	
		1,050*	6,722	193	35	

\* Projections for reference purposes

## **Spectral Power Distribution**



#### **Colorimetric Parameters**

Chromaticity Coordinate: x = 0.3847 y = 0.3782 / u' = 0.2274 v' = 0.5028 (duv=-5.66e-04) CCT= 3896K Prcp WL: Ld=579.8nm Purity=28.9% Peak WL: Lp=446nm FWHM: =16.2nm Ratio:R=17.1% G=80.6% B=2.2% Render Index: Ra = 71.6 AvgR = 0.0 TM30:Rf=73 Rg=94 R1 =69 R2 =78 R3 =87 R4 =71 R5 =69 R6 =70 R7 =79 R9 =0 R10=50 R11=68 R12=44 R13=70 R8 =50 R14=92 R15=62

#### **Electrical parameters**

V = 33.10 V I = 0.8006 A P = 26.50 W PF = 1.000 Freq=0.00 Hz



## **Performance Characteristics**



Table 5. SCMLLHE24-J5E-740-48

ССТ (К)	CRI	Tc (°C)	l <sub>F</sub> (mA)	Flux (lm)	Efficacy (Im/W)	Power (W)
3,901	71.5	27.8	1,200	10,789.00	203.10	27.80
4000 70	25*	1,050	9,533	208	46	
		1,400	12,478	201	63	
	55*	1,050	9,203	203	45	
		1,400	12,045	196	62	
			1,050	8,872	197	45
	85*	1,400	11,612	190	61	

\* Projections for reference purposes

# **Spectral Power Distribution**



#### **Colorimetric Parameters**

Chromaticity Coordinate: x = 0.3846 y = 0.3783 / u' = 0.2272 v' = 0.5029 (duv=-4.49e-04) Prcp WL: Ld=579.7nm Purity=29.0% CCT= 3901K Peak WL: Lp=447nm FWHM: =16.8nm Ratio:R=17.1% G=80.6% B=2.3% Render Index: Ra = 71.5 AvgR = 0.0 TM30:Rf=73 Rg=94 R1 =69 R2 =79 R3 =87 R4 =71 R5 =69 R6 =70 R7 =79 R9 =0 R11=67 R12=44 R8 =50 R10=50 R13=70 R14=93 R15=62

#### **Electrical parameters**

V = 43.93 V I = 1.201 A P = 52.74 W PF = 1.000 Freq=0.00 Hz

