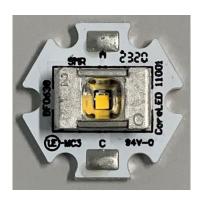


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CoreLED P/N 11003-STAR-E17 (Square)

- 5H x 5V Square
 - o Nichia E17

Product Description:



The SMR product family is a series of vacuum metallized high temperature polymer mini-reflectors that attach directly to a standard Starboard Circuit Board. These components achieve high light collection efficiency, a variety of engineered beam patterns, and are supplied for high volume electronics assembly.

Key Features:

- o Optical reflector mounted on starboard for easy assembly
- o Supplied on 20mm Starboard
- o Increased control of light output
- \circ Precision alignment (within ± 0.1 mm)
- o Family of optical beam patterns
- o Manufactured without the need for additional components to attach the optics
- o Provided on starboard for evaluation and testing

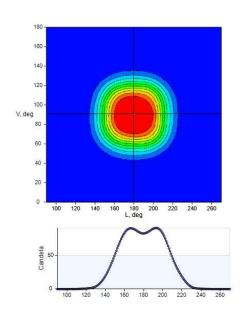


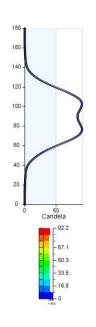
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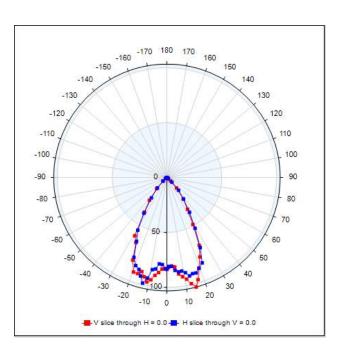
Emitted Pattern Profile

Nichia E17 (Measured)

IES NEMA Type	5H x 5V
Maximum Candela	104
Maximum Candela Angle	5.0H -13.0V
Horizontal Beam Angle (50%)	55.9
Vertical Beam Angle (50%)	58.8
Horizontal Field Angle (10%)	85.6
Vertical Field Angle (10%)	89.4
Total Rated Lamp Lumens	100
Total Efficiency	79%







FLOOD/CANDELA VERSUS ANGLE

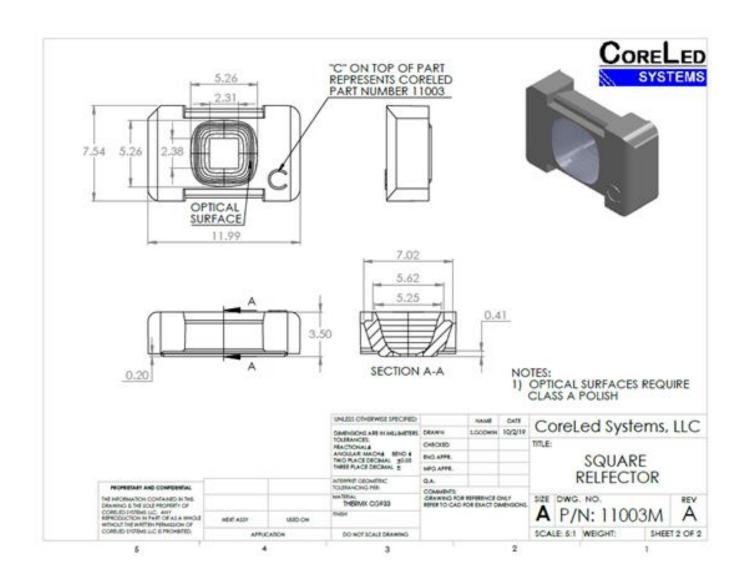
56 DEGREE FWHM

IES files and Raytrace models are available upon request from CoreLed Engineering.



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Mechanical Profile: Reflector



CAD files available upon request from CoreLed Engineering



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LED Information



NCSWE17AT

- Pb-free Reflow Soldering Application
- · RoHS Compliant

NICHIA STS-DA1-3687I < Cat.No.170112>

SPECIFICATIONS

(1) Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	I _F	700	mA
Pulse Forward Current	Ipp	1000	mA
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	2.31	W
Operating Temperature	Toor	-40~100	°C
Storage Temperature	T _{stg}	-40~100	°C
Junction Temperature	T ₃	135	°C



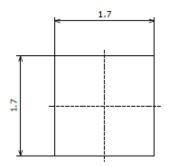
^{*} I_{pp} conditions with pulse width ≤10ms and duty cycle ≤10%.

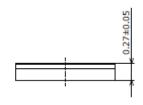
(2) Initial Electrical/Optical Characteristics

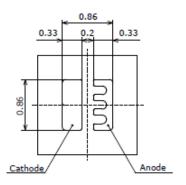
It	em	Symbol	Condition	Тур	Max	Unit
Forward Voltage		V _F	I _F =350mA	3.0	-	v
Reverse Current		Ig	V _R =5V	-	-	μА
R70	Luminous Flux	Φν	I _F =350mA	158	_	lm
	Color Rendering Index	R _a	I _F =350mA	72	-	-
R8000	Luminous Flux	Φ,	I _F =350mA	148	-	lm
	Color Rendering Index	Ra	I _F =350mA	82	-	-
R9050	Luminous Flux	Φν	I _F =350mA	125	-	lm
	Color Rendering Index	R _a	I _F =350mA	92	-	-
R9080	Luminous Flux	Φν	I _F =350mA	118	-	lm
	Color Rendering Index	Ra	I _F =350mA	92	-	-
Chromaticity Coordinate	x	-	I _F =350mA	0.3447	-	-
	у	-	I _F =350mA	0.3553	-	-
Thermal Resistance		Resc	-	0.5	1.0	°C/W



- * Luminous Flux value as per CIE 127:2007 standard.
- * Chromaticity Coordinates as per CIE 1931 Chromaticity Chart.









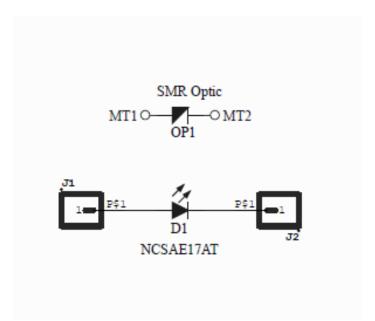
^{*} The thermal resistance value (R_{80C}) is used to perform logical analysis (e.g. computer-based thermal analysis simulation) and represents a thermal resistance between the die to the T_C measurement point (PCB used: Aluminum PCB t=1.5mm, Insulating layer t=0.12mm).

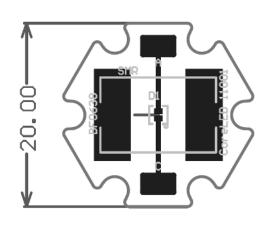
^{*} For more details on thermal resistance, see CAUTIONS, (6) Thermal Management.

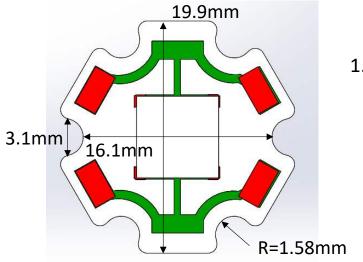


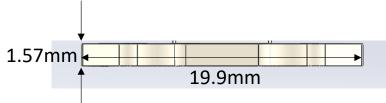
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Starboard Schematic











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Electrical:

From LED Data sheet: recommended operation is Typical 3.0V at 350mA (1 Watt to provide 150 lumens).

Thermal:

Recommended attachment to heat sink to dissipate 1W (3.0V at 350mA). LED is rated higher and can be run up to 700mA with appropriate heatsinking provided.

Packaging:

Individually packaged in static controlled bag.