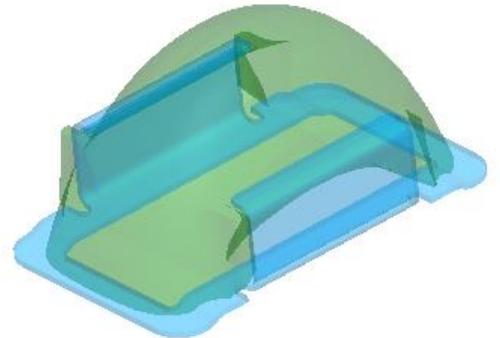


CoreLED P/N 12001

- Linear Collimating Optic
- Compatible with following LED products
 - 2020 LED package
 - 3535 LED package (no dome)
 - Other LED packages may be compatible (Contact CoreLed Engineering for requests)



Product Description:

The SMO product family is a series of injection molded high-temperature silicone miniature lenses that attach directly to PCB with solder clip using standard reflow method. These components achieve high light collection efficiency, a variety of engineered beam patterns, and are supplied for high volume pick and place electronics assembly.

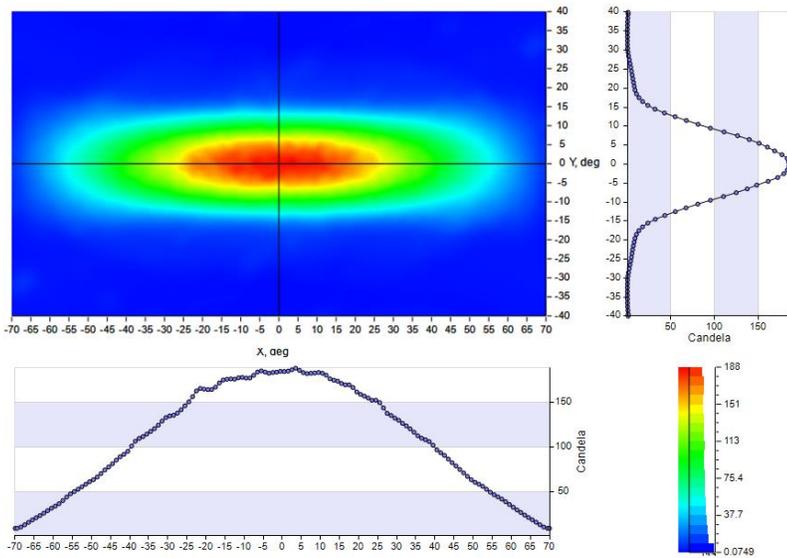
Key Features:

- Optical lens is reflow mounted at the same time as LED assembly
- Supplied in tape and reel
- Increased control of light output
- Precision alignment (within $\pm 0.1\text{mm}$)
- Family of optical beam patterns that will work using IR reflow
- Reflow solder clip directly attached to lens
- Standard pick and place equipment
- Manufactured without the need for additional components to attach the optics

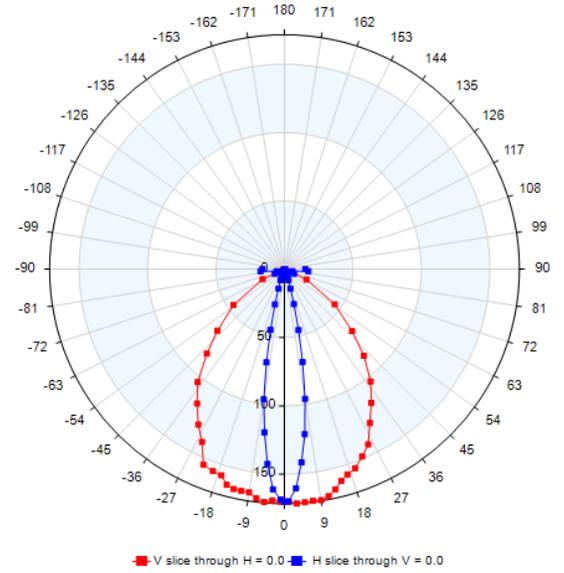
Emitted Pattern Profile

Nichia E17 (Measured) 1717 LED package

IES NEMA Type	7H x 3V
Maximum Candela	173
Horizontal Beam Angle (50%)	84
Vertical Beam Angle (50%)	19.5
Horizontal Field Angle (10%)	131
Vertical Field Angle (10%)	33
Total Rated Lamp Lumens	100



ANGULAR DISTRIBUTION OF LUMINOUS INTENSITY (cd)

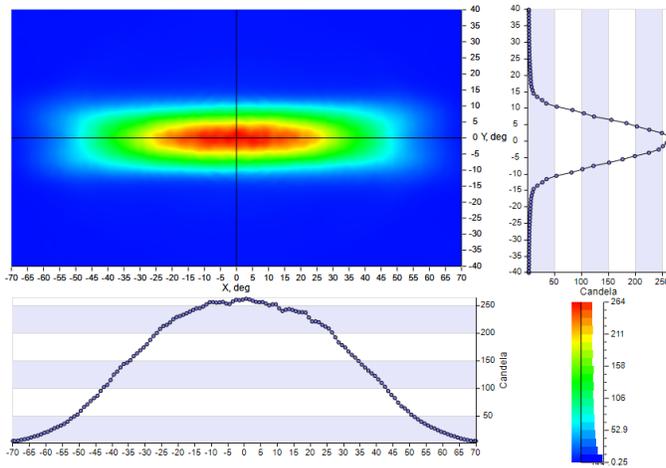


POLAR INTENSITY PLOT

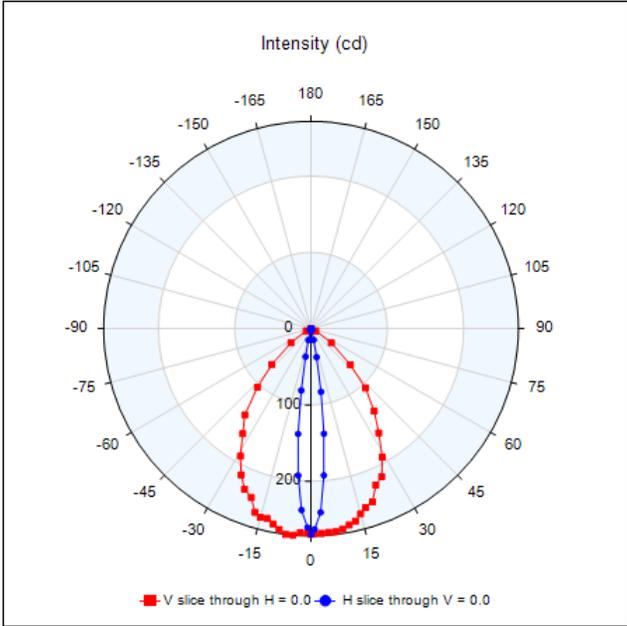
Emitted Pattern Profile

OSRAM Oslon Compact (Measured) 1519 LED package

IES NEMA Type	6H x 2V
Maximum Candela	230
Horizontal Beam Angle (50%)	78
Vertical Beam Angle (50%)	15
Horizontal Field Angle (10%)	117
Vertical Field Angle (10%)	26
Total Rated Lamp Lumens	100



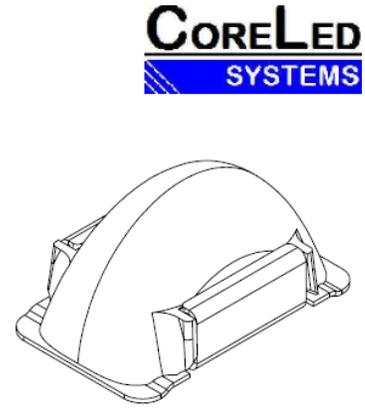
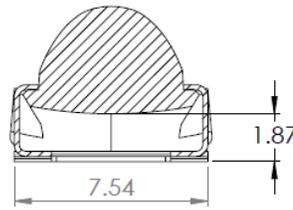
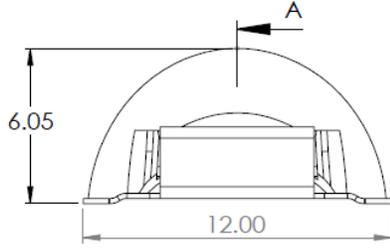
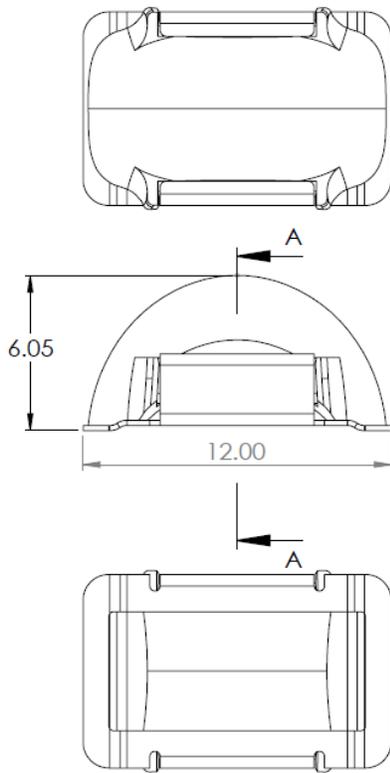
ANGULAR DISTRIBUTION OF LUMINOUS INTENSITY (cd)



POLAR INTENSITY PLOT

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

Mechanical Profile



NOTES:

1. PART TO BE FREE OF OIL AND OTHER FOREIGN MATERIALS DETRIMENTAL TO ASSEMBLY FUNCTION OR SAFE HANDLING
2. FINAL PACKAGED PART TO MEET CLEANLINESS REQUIREMENT ACCORDING TO VDA 19: CCC = N(H-N00), VALID FOR METALLIC PARTICLES ONLY.
(NO METAL PARTICLES > 300 um ALLOWED)
3. ALL TOLERANCES +/- 0.1 mm UNLESS OTHERWISE SPECIFIED
4. PART TO BE PACKAGED TAPE AND REEL. SEE DATASHEET

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF CORELED SYSTEMS LLC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF CORELED SYSTEMS LLC IS PROHIBITED.

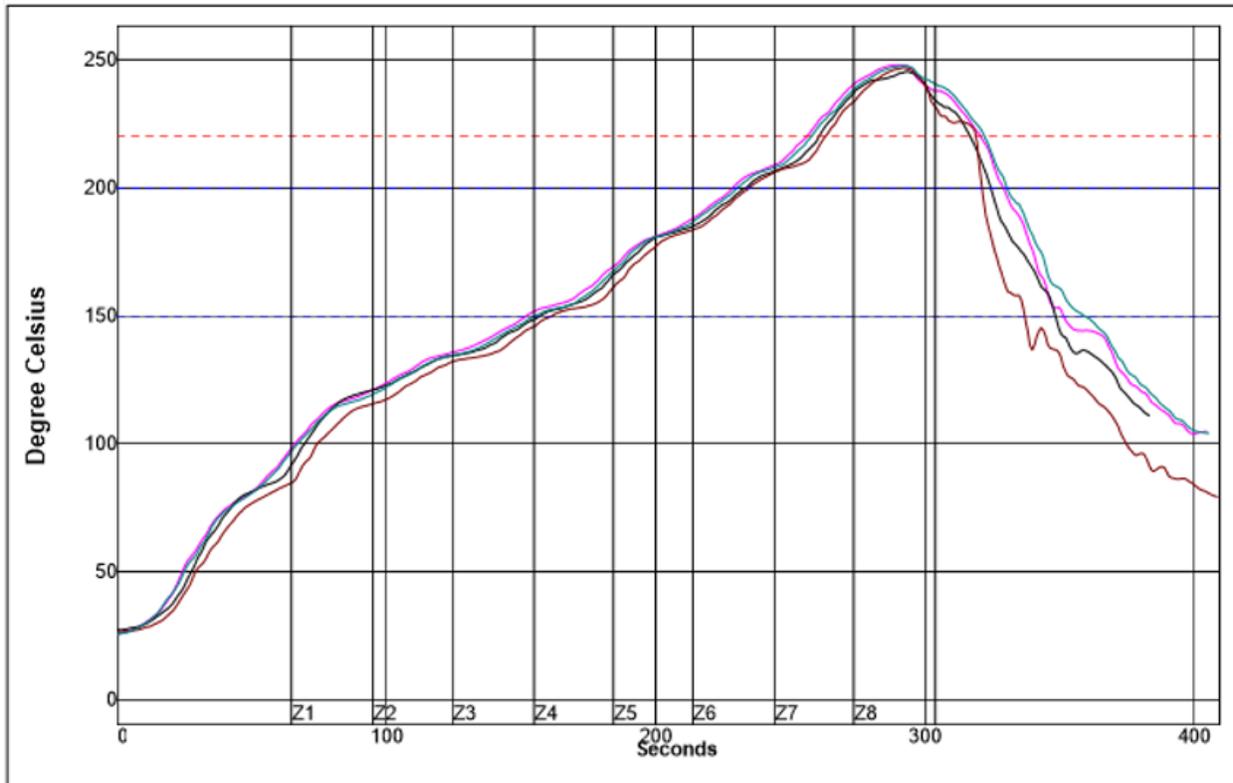
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DIMENSIONS ARE IN MILLIMETERS	DRAWN	B.WELLS 3/25/21
TOLERANCES:	CHECKED	
FRACTIONAL ±	ENG APPR.	
ANGULAR: MACH ± BEND ±	MFG APPR.	
TWO PLACE DECIMAL ±	G.A.	
THREE PLACE DECIMAL ±	COMMENTS:	
INTERPRET GEOMETRIC TOLERANCING PER:		
MATERIAL		
FINISH		

CoreLed Systems, LLC		
TITLE:		
SURFACE MOUNT OPTIC 12X7 LINEAR COLLIMATOR		
SIZE	DWG. NO.	REV
A	P/N: 12001	1.1
SCALE: 5:1	WEIGHT:	SHEET 1 OF 3

CAD files available upon request from CoreLed Engineering

Reflow Profile



Setpoints (Degree Celsius)								
Zone	1	2	3	4	5	6	7	8
Top	125	148	152	173	210	235	268	257
Bottom	125	148	152	173	210	235	268	257
Conveyor Speed	50.0 cm/min							

Example Reflow profile used for testing of SMO units by CoreLed

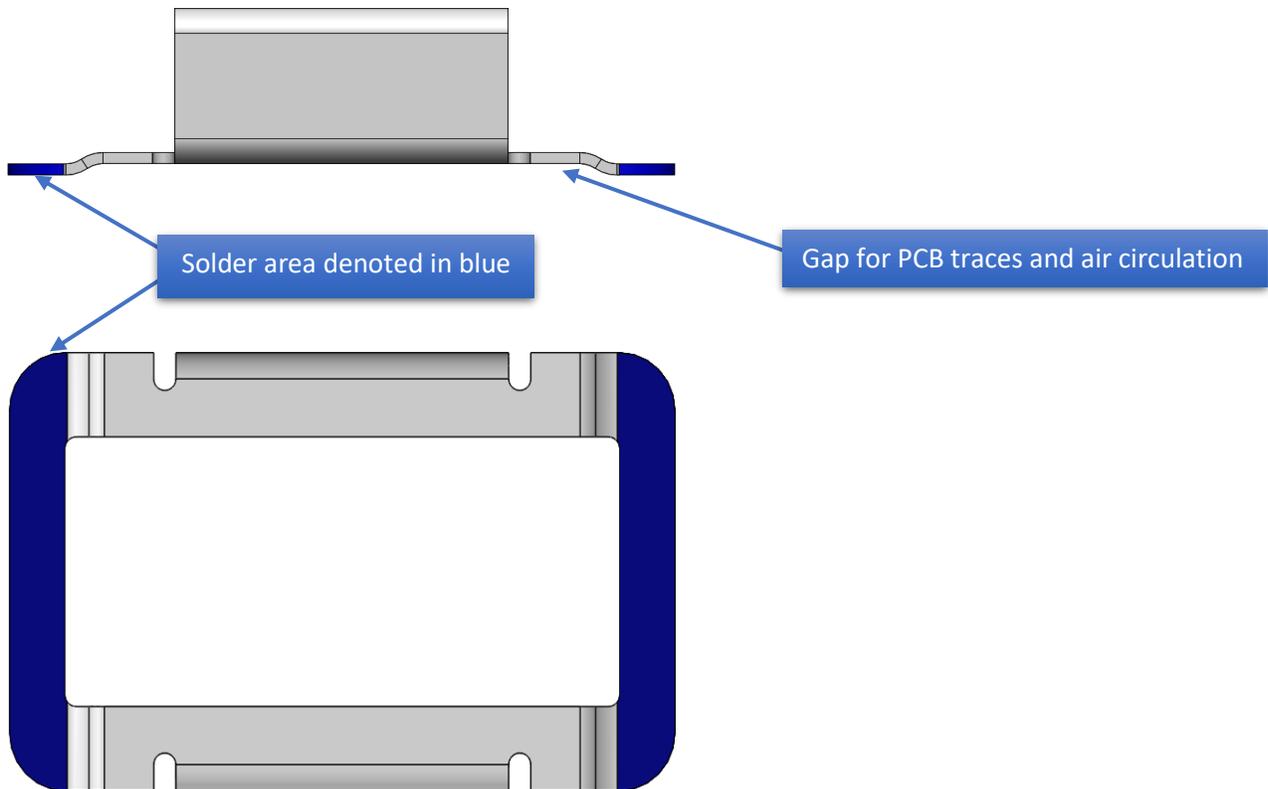
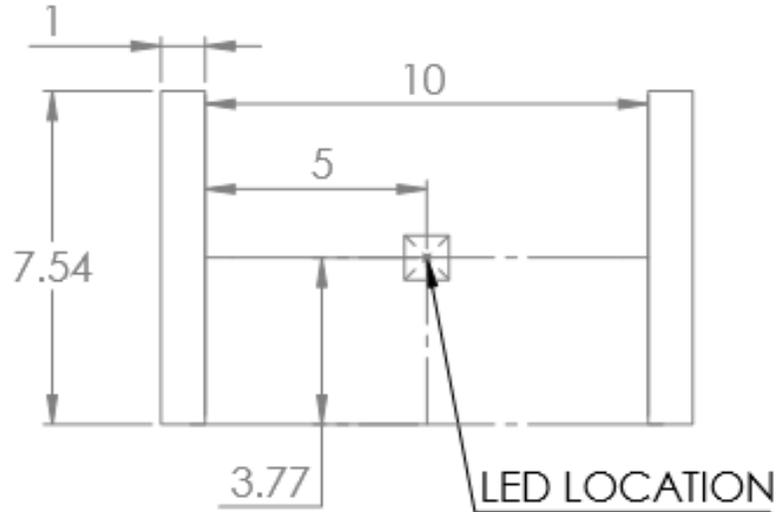
Surface Mounted Optic (SMO)

12mm x 7mm Linear Collimator

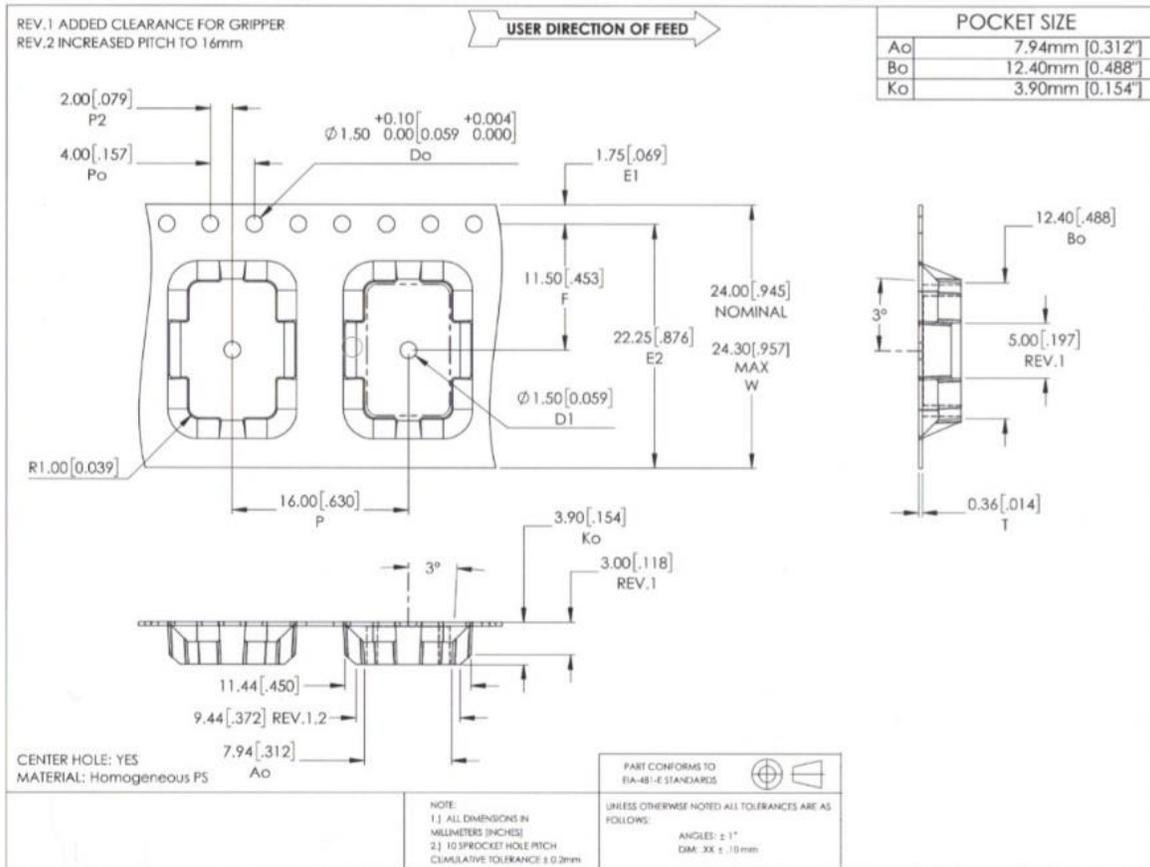
Rev 1.0 – 05/13/21

Solder Pad drawing

Dimensions are in mm



Packaging Example (pocket depth will change to match lens height)



Contact CoreLED for product-specific pocket depth

Packaging information for tape and reel delivery.

