

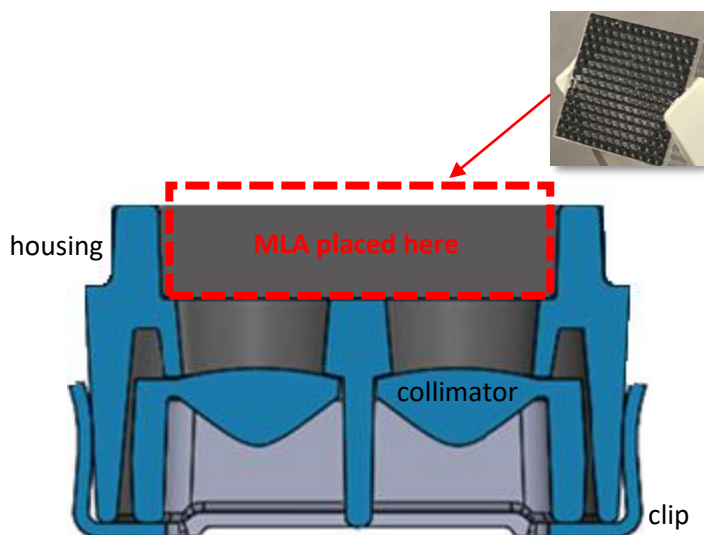
CoreLED P/N 13020

### Product Description:

Surface mountable submodule designed for Quad MLA. Submodule is comprised of a metal clip for PCB attachment, collimating 2x2 lens array and a housing. A separate cap to retain MLA is available.

### Key Features:

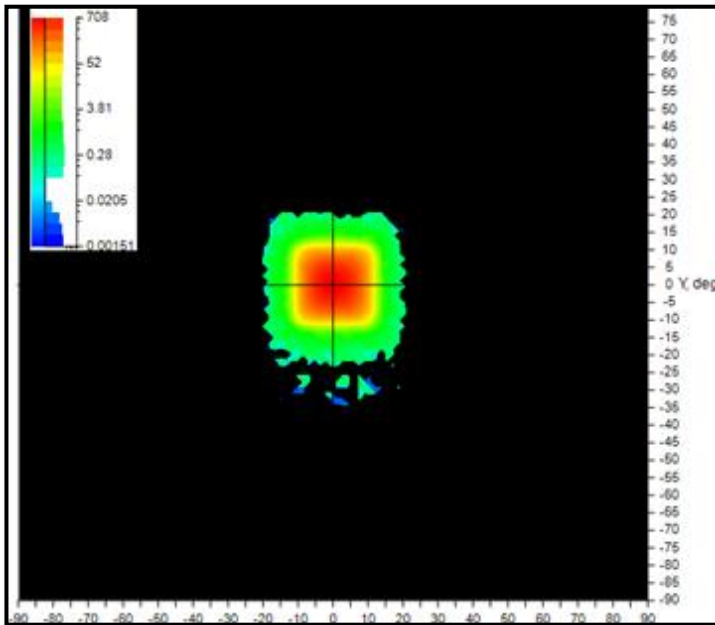
- Collimating optics designed to work with Osram Oslon Boost HM
- Other LEDs can be analyzed for fit & performance upon request from CoreLED
- Supplied in tape and reel
- Precision alignment (within  $\pm 0.2\text{mm}$ )
- Standard pick and place equipment



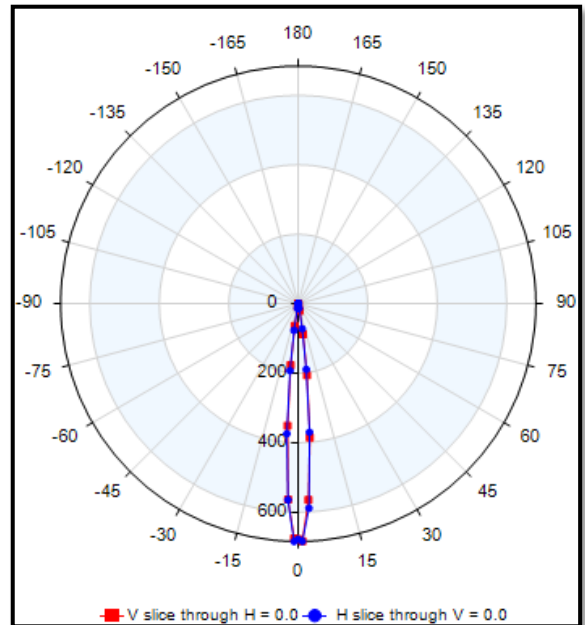
### Emitted Pattern Profile

Oslon Boost HM KW CULPM1.TG

CHARACTERISTICS	
IES NEMA Type	2H x 2V
Maximum Candela	684
Maximum Candela Angle	0.0H -1.0V
Horizontal Beam Angle (50%)	10.6
Vertical Beam Angle (50%)	10.7
Horizontal Field Angle (10%)	18.5
Vertical Field Angle (10%)	18.4
Total Rated Lamp Lumens	100
Total Efficiency	28.25%



Angular Intensity (cd)



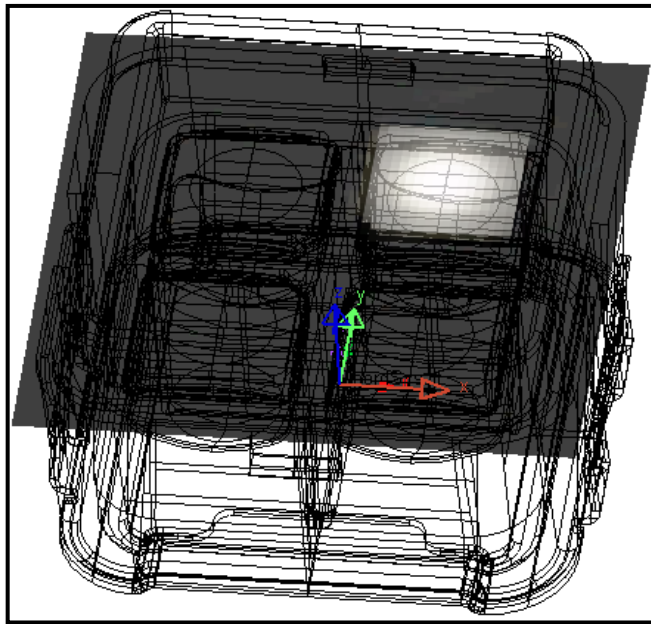
Intensity (cd)

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

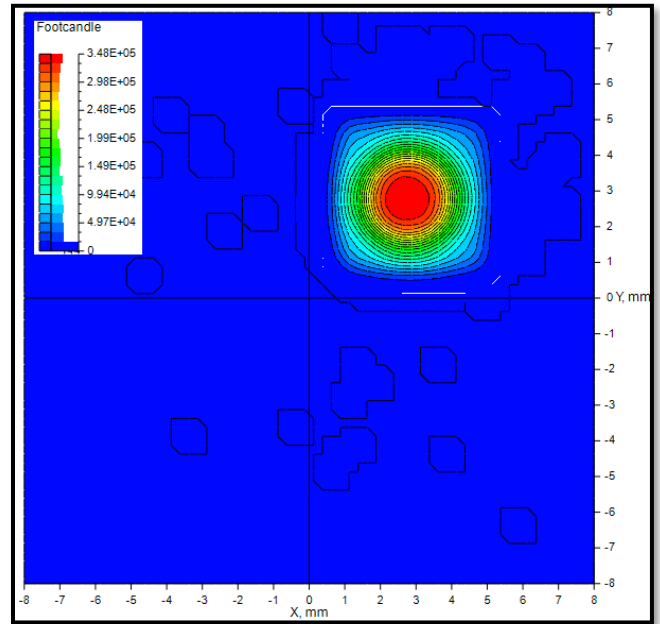
### Simulation

OSRAM OSLON Boost HM with surface mount array mask and lens with 100 lumens

CHARACTERISTICS	
IES NEMA Type	1H x 1V
Maximum Candela	879
Maximum Candela Angle	0.0H 0.0V
Horizontal Beam Angle (50%)	9.5
Vertical Beam Angle (50%)	9.4
Horizontal Field Angle (10%)	17.4
Vertical Field Angle (10%)	17.4
Total Rated Lamp Lumens	100



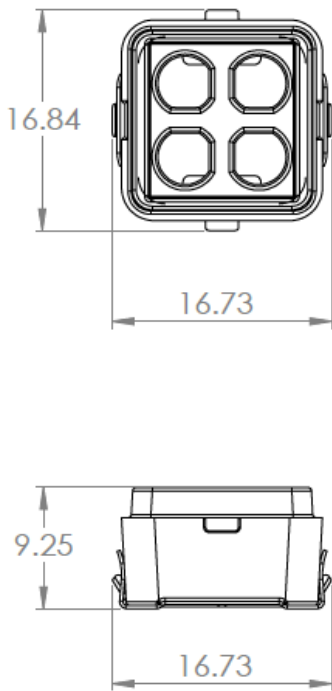
Illuminance on a plane (7mm away)



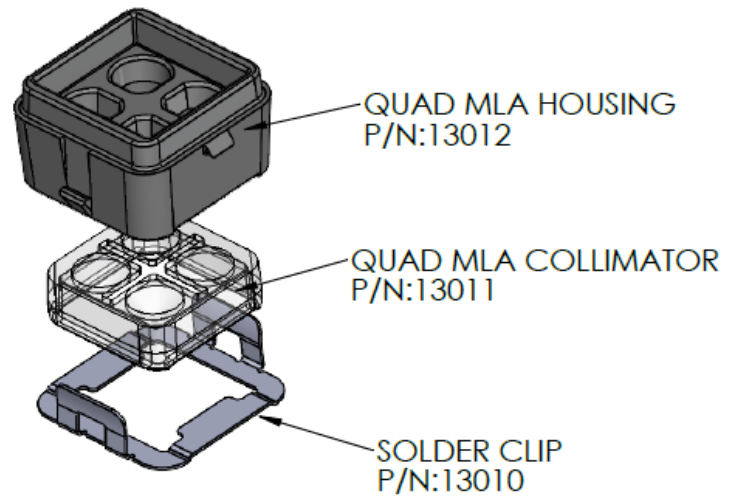
Linear Illuminance on a plane (7mm away)

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

### PROTOTYPE ONLY



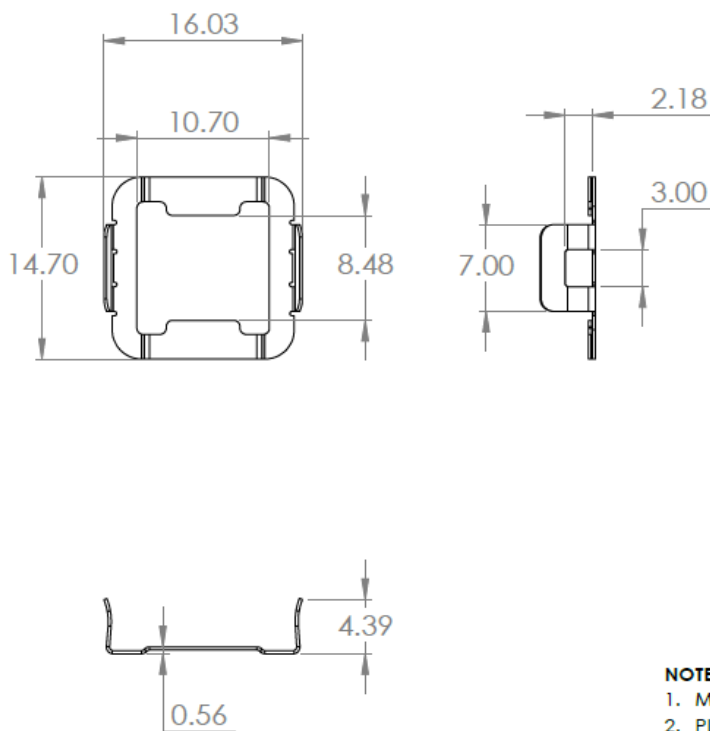
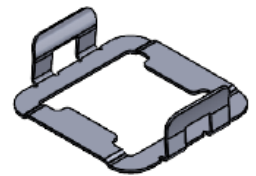
### EXPLODED VIEW



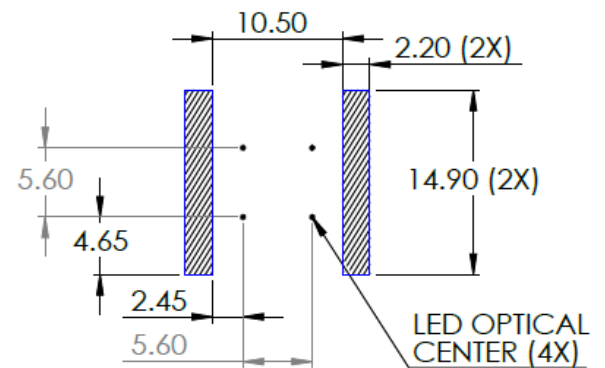
<b>PROPRIETARY AND CONFIDENTIAL</b> THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF CORELED SYSTEMS LLC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF CORELED SYSTEMS LLC IS PROHIBITED.			UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES: FRACTIONAL ± ANGULAR: MACH ±    BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ± INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL FINISH APPLICATION DO NOT SCALE DRAWING	NAME B.WELLS CHECKED ENG APPR. MFG APPR. Q.A. COMMENTS:	DATE 3/28/23	CoreLed Systems, LLC TITLE: <h2 style="text-align: center;">QUAD MLA SUB-MODULE</h2>	SIZE <h1 style="font-size: 2em;">A</h1>	DWG. NO. <h1 style="font-size: 2em;">P/N: 13020</h1>	REV <h1 style="font-size: 2em;">1.1</h1>
	NEXT ASSY	USED ON							
	APPLICATION								
							SCALE: 2:1	WEIGHT:	SHEET 1 OF 2

**CAD files available upon request from CoreLed Engineering**

### Mechanical Profile: Solder Clip



SOLDER PADS IN PCB



**NOTES:**

1. MATERIAL: 0.254mm (0.010") THICK 510 H08 TEMPER PHOSPHOR BRONZE
2. PLATING: 5.0 MICRONS MINIMUM SOLDERABLE Sn OVER Cu FLASH, PRE PLATED
3. ALL TOLERANCES +/- 0.25 mm AND +/- 1 DEGREE UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	CoreLed Systems, LLC
DIMENSIONS ARE IN MILLIMETERS		DRAWN	B.WELLS	
TOLERANCES:		CHECKED		
FRACTIONAL ±		ENG APPR.		
ANGULAR: MACH ± BEND ±		MFG APPR.		
TWO PLACE DECIMAL ±		G.A.		
THREE PLACE DECIMAL ±		COMMENTS:		
INTERPRET GEOMETRIC TOLERANCING PER:				
MATERIAL				
510 H08 TEMPER PHOSPHOR BRONZE PRE TIN PLATED				
FINISH				
NEXT ASSY		USED ON		
APPLICATION		DO NOT SCALE DRAWING		
TITLE:				CoreLed Systems, LLC
TITLE:				MLA SOLDER CLIP
SIZE	DWG. NO.	REV		
A	P/N: 13010	A.1		
SCALE: 2:1	WEIGHT:	SHEET 1 OF 1		

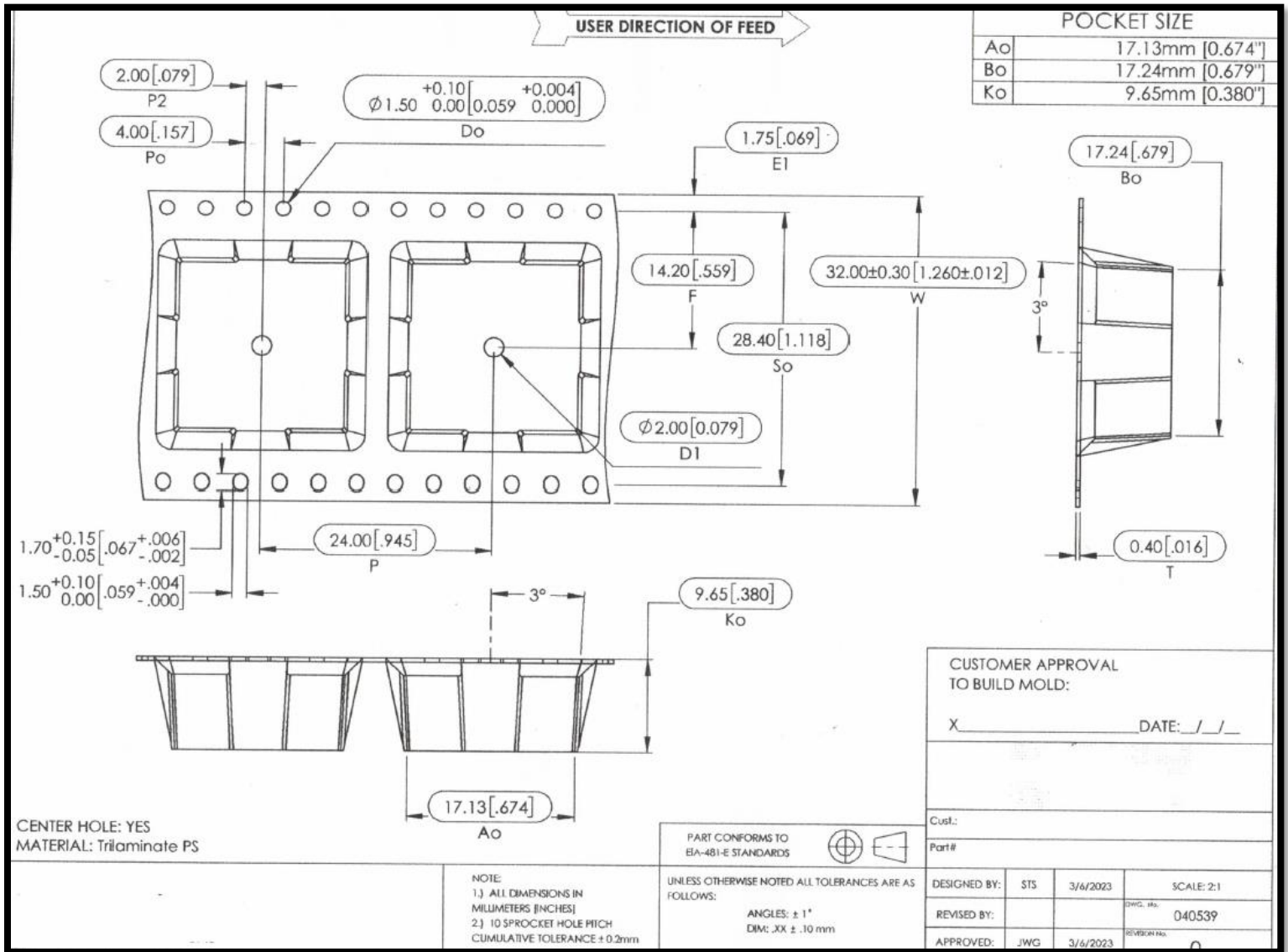
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CAD files available upon request from CoreLed Engineering

**Packaging:**

Individually packaged & delivered in tape and reel

**Preliminary Design**



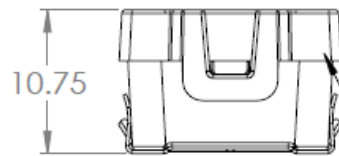
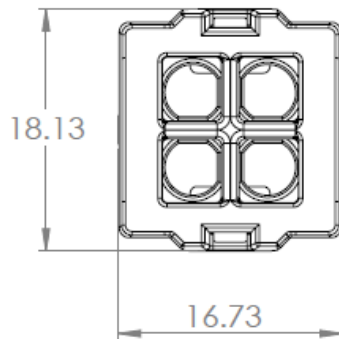
### Appendix 1: Short & Tall Caps

## PROTOTYPE ONLY



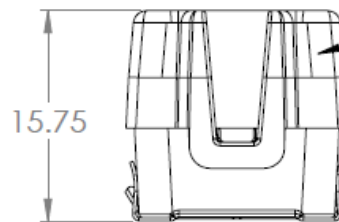
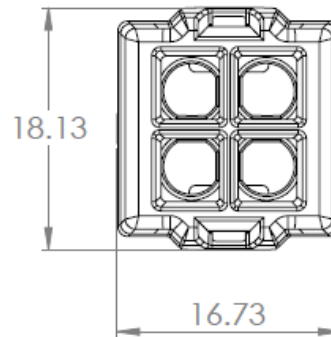
QUAD MLA MODULE SHOWN WITH OPTIONAL CAP (SOLD SEPARATELY)

SHORT CAP OPTION



SHORT CAP  
P/N:13013

TALL CAP OPTION



TALL CAP  
P/N:13014

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MILLIMETERS  
TOLERANCES:  
FRACTIONAL ±  
ANGULAR: MACH ± BEND ±  
TWO PLACE DECIMAL ±  
THREE PLACE DECIMAL ±

INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	B.WELLS	3/28/23
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

CoreLed Systems, LLC

TITLE:  
**QUAD MLA  
SUB-MODULE**

SIZE <b>A</b>	DWG. NO. P/N: 13020	REV <b>1.1</b>
SCALE: 2:1	WEIGHT:	SHEET 2 OF 2

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NEXT ASSY	USED ON
APPLICATION	