



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## SANDRA-12-M

~30° medium beam

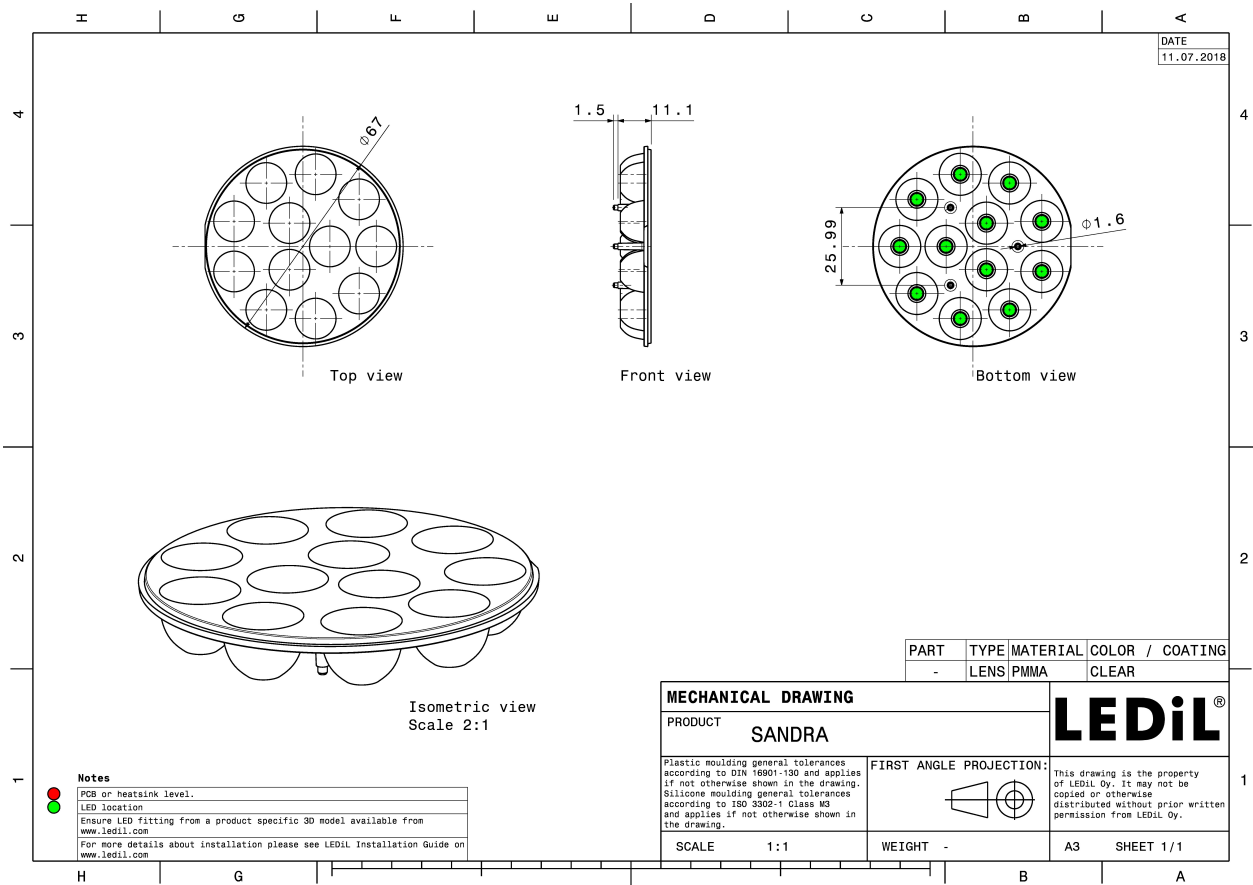
### TECHNICAL SPECIFICATIONS:

Dimensions	Ø 67.0 mm
Height	11.1 mm
Fastening	glue, pin
Colour	clear
Box size	480 x 280 x 300 mm
Box weight	7.1 kg
Quantity in Box	306 pcs
ROHS compliant	yes ⓘ



### MATERIAL SPECIFICATIONS:

Component	Type	Material	Colour
SANDRA-12-M	Lens array	PMMA	clear

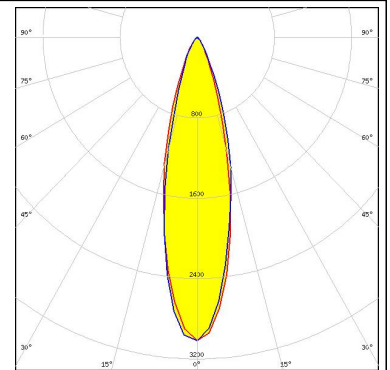




#### PHOTOMETRIC DATA (MEASURED):

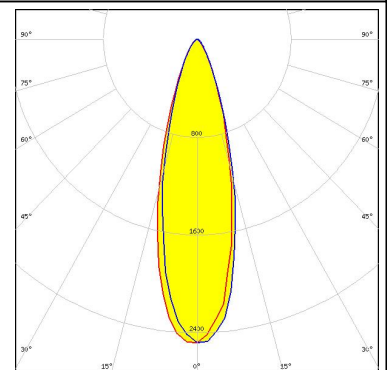
**CREE** ⇄

LED XP-E  
FWHM 26.0°  
Efficiency 83 %  
Peak intensity 3.000 cd/lm  
Required components:



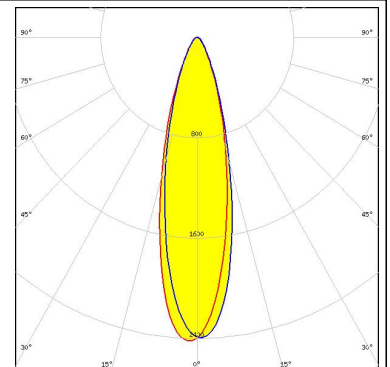
**CREE** ⇄

LED XP-G  
FWHM 28.0°  
Efficiency 91 %  
Peak intensity 2.500 cd/lm  
Required components:



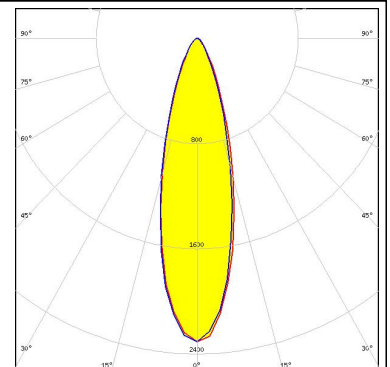
**NICHIA**

LED NCSxx19A  
FWHM 27.0°  
Efficiency 86 %  
Peak intensity 2.400 cd/lm  
Required components:



**NICHIA**

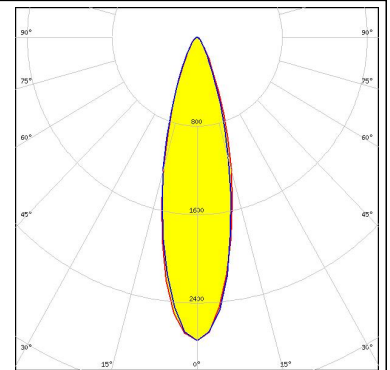
LED NVSxx19A  
FWHM 30.0°  
Efficiency 86 %  
Peak intensity 2.300 cd/lm  
Required components:



#### PHOTOMETRIC DATA (MEASURED):

**OSRAM**  
Opto Semiconductors

LED Oslon SSL 80  
FWHM 28.0°  
Efficiency 90 %  
Peak intensity 2.700 cd/lm  
Required components:



**SEOL**  
SEOUL SEMICONDUCTOR

LED Z5  
FWHM 28.0°  
Efficiency %  
Peak intensity cd/lm  
Required components:

### GENERAL INFORMATION:

NOTE: The typical beam angle will be changed by different color, chip size and chip position tolerance. The typical total beam angle is the full angle measured where the luminous intensity is half of the peak value.

### MATERIALS:

As part of our continuous research and improvement processes, and to ensure the best possible quality and availability of our products, LEDiL reserves the right to change material grades without notice.

### PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

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#### LEDiL Oy

Joensuunkatu 13  
FI-24240 SALO  
Finland

#### LEDiL Inc.

228 West Page Street  
Suite D  
Sycamore IL 60178  
USA

#### Local sales and technical support

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)

#### Shipping locations

Salo, Finland  
Hong Kong, China

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