

## IR VCSEL Array Laser Illuminator

### LL10x0-05180-850CMP

#### Features

- Self-developed high performance VCSEL chip, no attenuation
- High efficiency up to 40% @25°C, >35% @ 50°C
- VCSEL chip, wide operating temperature -40-+85°C
- VCSEL array chip with large emission area, eye safety
- Self-developed high performance VCSEL chip, no attenuation
- Beam angle tunable manually
- High reliability, lifetime > 50000hrs
- Compact, easy to integrate and use
- Negligible off-axis, easy to collimate with camera lens
- Uniform beam power density, low speckle
- Friendly interface, security surveillance compatible
- CE certificate
- High efficiency, low heat
- Environment friendly



#### Applications

- Video security surveillances
- Automobile nightvision (ADAS)
- Machine vision
- Gesture recognition
- Display & keyboard
- Medical applications
- Military applications



#### Descriptions

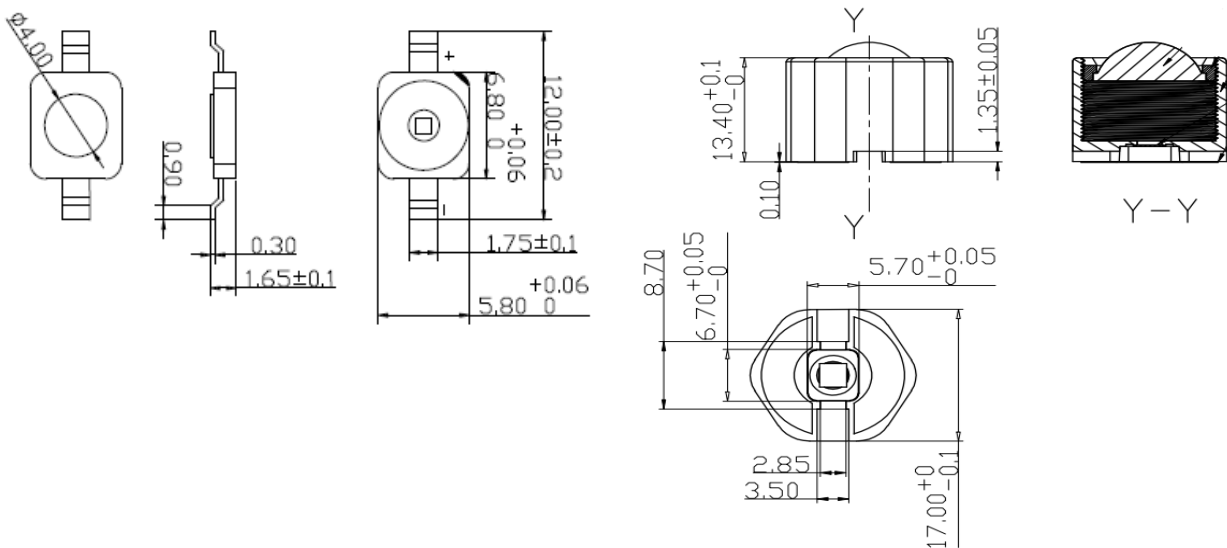
This IR illuminator is of high performance with low cost. It is the first laser illuminator similar to IR LED one globally. The laser is packaged with the form of IR LED, which can be mounted onto aluminum plate like the LEDs. Due to special optics design, the optical beam intensity is uniform and the beam angle can be manually tuned between 4 and 36 degrees, 46 degree, and between 65 and 77 degrees, even 180 degree. This performance is outstanding for field installations to match the field of view of lens, to solve the mismatch between illuminator and camera. It is very easy to use. The LED users just remove the LEDs and mount the laser diodes with current adjustment and put the right angle lens on the laser diodes. This laser illuminator is very bright and reliable and of low heat. Simultaneously, users can employ different beam angle illuminators to cover different range. It has the cost compared to IR LEDs, and it is ideal for security surveillance and medical applications and pattern recognition.

#### Specifications

Parameters	Values	Units	Remarks
Model no.	LL10x0-05180-850CMP		
Mode	Multimode	—	
wavelength	850±15	nm	

Optical output power	≥600	mW	@exit
Spot shape	circular		
Illuminating distance	Depending on beam angle	m	
Spot uniform	uniform		
Beam angle	4-36; 46; 65-100; 110;120;130;180	°	
Voltage	2.1-2.3		
Current	0.85	A	
Operating mode	CW		
lifetime	50000	hrs	
Operating Temp.	-40 - +80	° C	
Storage Temp.	-40 - +85	° C	
Power consumption	<2	W	
Dimensions	φ18x14	mm	
Material	POM		
Appearance	white	-	
Laser class	Class 3		≤10s staring
Anode cable	red		
Cathode cable	black		
Gross weight	3	g	
Cooling	Al plate conductor	-	

### Mechanic profile



### Laser Safety

The output power of this module is classified as class III, one can refer to IEC 60825-1:2014 «Laser Product Safety: Part 1:Devices classification, requirements and user' s Manual» .

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