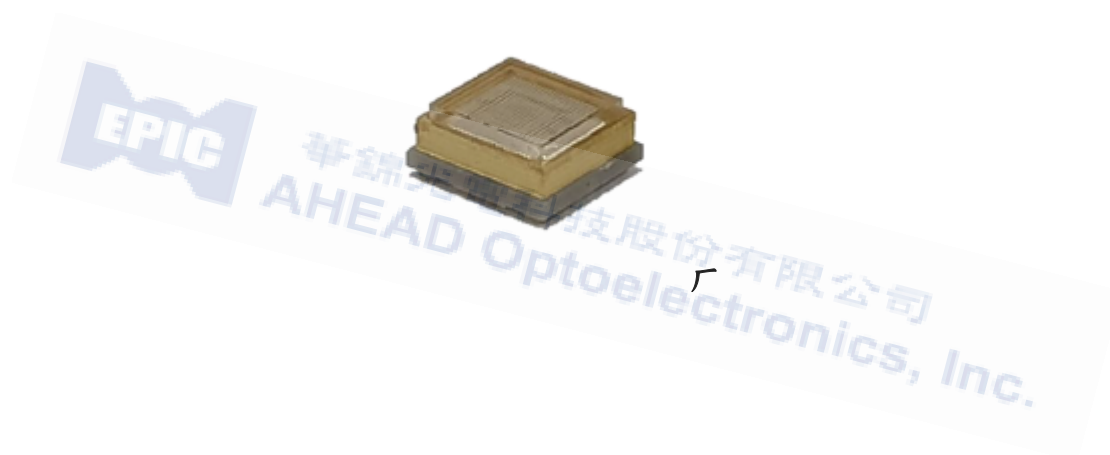


Flood Illuminator

FI-3235-940-2000-90-D110

Description

The flood illuminator provided accurate flood pattern with MLA & laser emitting technology. It can project flood pattern with large field of view. The bandwidth of flood illuminator is narrow under stable thermal condition (VCSEL laser).



Features

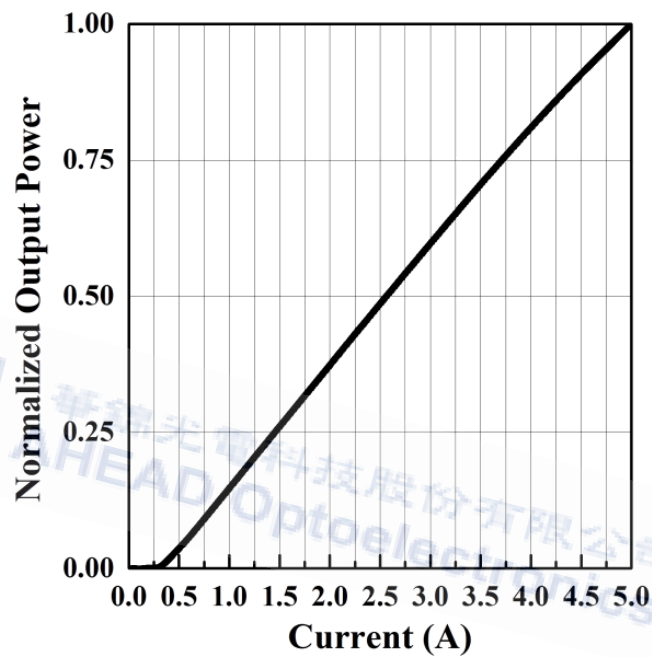
- High power applications
- High reliability
- Large FOV projection
- Near-IR illumination (940nm)
- Narrow bandwidth under stable thermal condition
- Photodiode Detection mechanism

Applications

- 3D object distance measurement
- 3D scanning
- 3D Gesture Recognition
- 3D Liveness Detection
- Security monitor
- Infrared lighting
- Robot vision

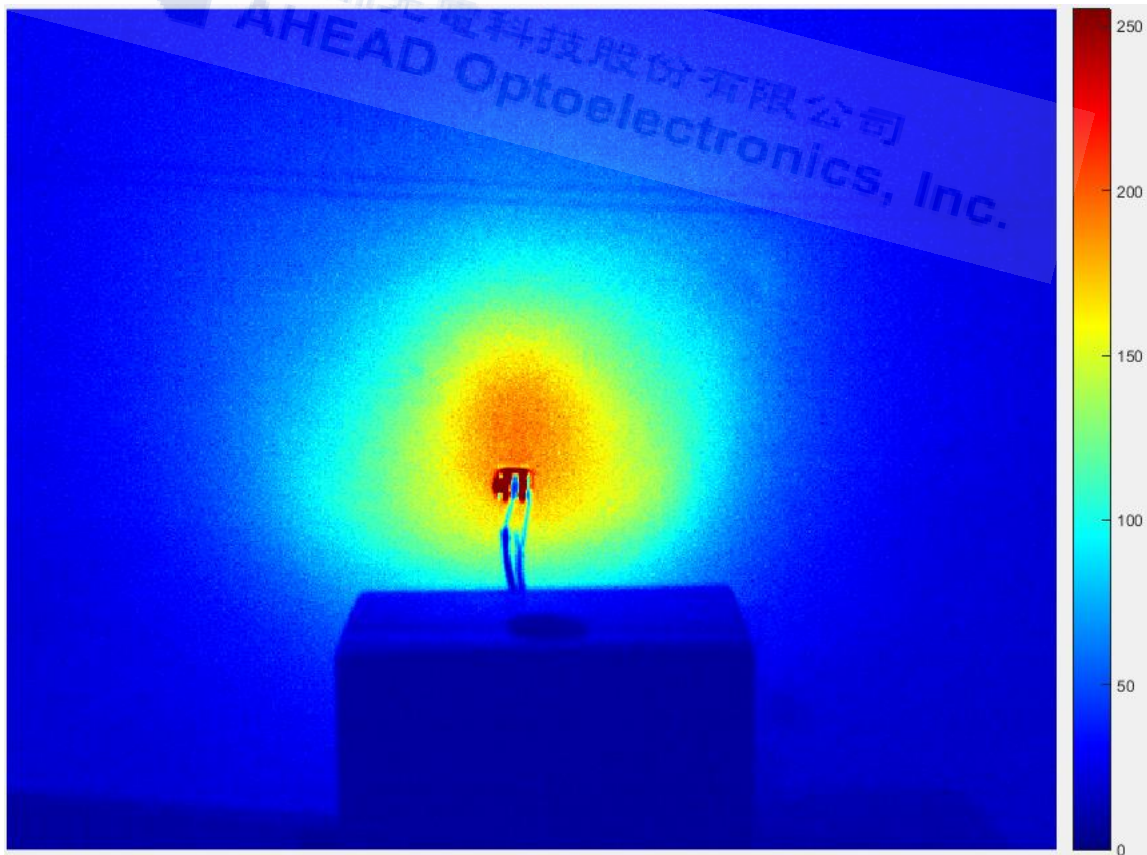
Electrical Characteristics (@room tempature, $T_a=25$ degree C)

Parameters	Condition	min	typical	max	unit
Output power	$I_F=3.0A$, $t_p=500\mu s$	1800	2250	2800	mW
Threshold current	$I_F=3.0A$, $t_p=500\mu s$	-	500	-	mA
Operating current	$I_F=3.0A$, $t_p=500\mu s$	-	3000	-	mA
Operating voltage	$I_F=3.0A$, $t_p=500\mu s$	1.8	2.0	2.2	V
Convert efficiency	$I_F=3.0A$, $t_p=500\mu s$	34	37	40	%



Optical Characteristics

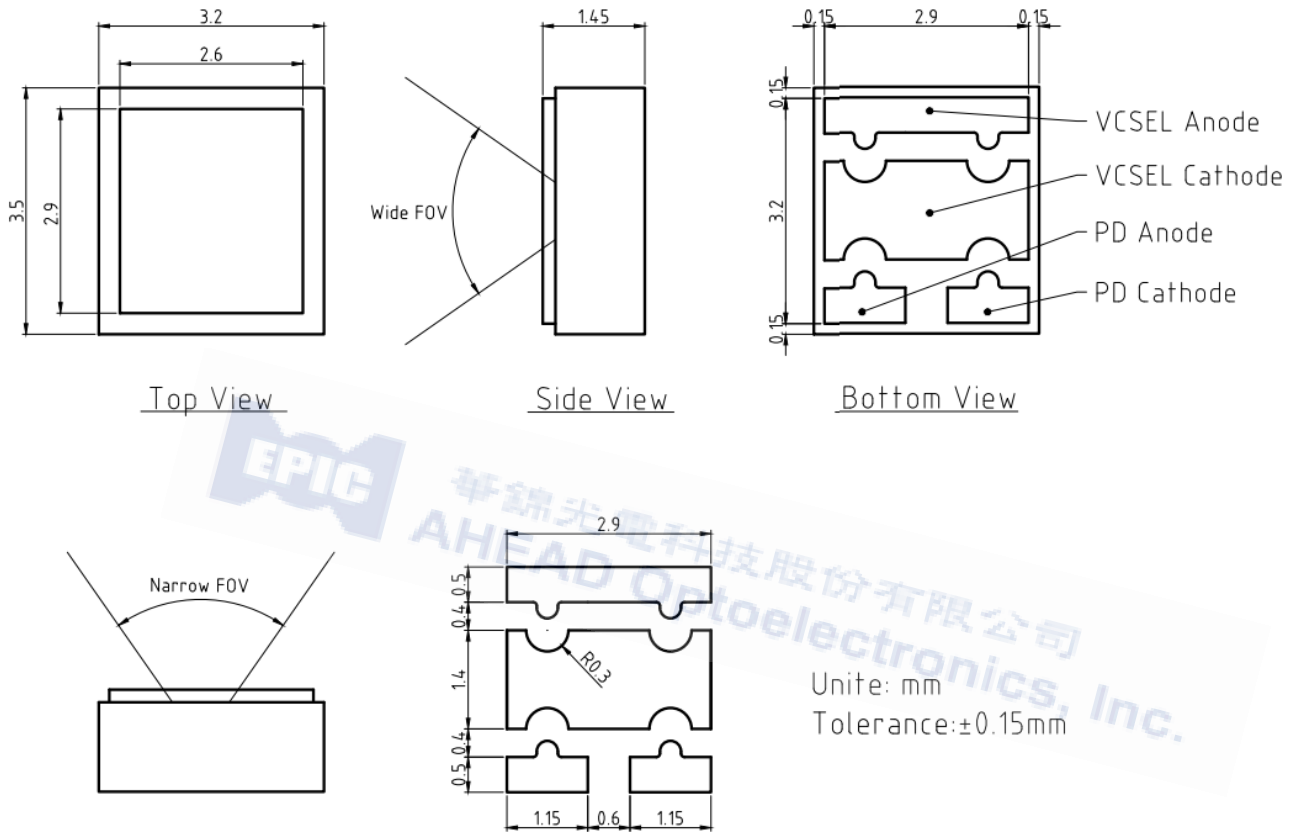
Parameters	Condition	min	typical	max	unit
Wavelength		930	940	950	nm
Horizontal FOV of projection		-	90	-	Deg.
Vertical FOV of projection		-	90	-	Deg.
Diagonal FOV of projection			110		Deg.



Experimental Image pattern

Mechanical characteristics

2D Drawing



Caution

1. Wearing ESD protections device before handling the moulde.
2. Avoid to touch the emitting area or optical items of the module.
3. Never look into the light from emitting area directly.



Disclaimer

1. Semiconductor devices generally fail due to intrinsic characteristic so does AHEAD module as it includes laser chip and laser diode (VCSEL). Hence, customer's product has to be designed with full regard to the safety by incorporating the redundancy, fire prevention, error prevention therefore, any problem or error with AHEAD module does not cause any accidents resulting in injury, death, fire, property damage, economic damage or environment damage. In case customer uses module in the system requiring higher safety, customer is responsible to review the conditions for consistency of entire system and all safety concerns to meet the specific requirements. AHEAD is not liable to the user for any losses, costs, damages or expenses incurred arising directly or indirectly from any misuse or unintended use of the product.
2. According to the above is provided by AHEAD who reserves the rights to modify, to insert, and/or to withdraw any part of the rules specified herein.



Version#	Remark	Date
1.0	3235 initial version	2023/12/04
1.1	watermark	2024/01/31