

# KLC433

## Technical Data

These data are representative characteristics and do not guarantee the characteristics of mass-produced products.

2023

- **Specification**
- **Outline, Pin connection**
- **Technical data**
  - **L-I, V-I**
  - **Wavelength**
  - **FFP**
  - **ESD failure level**

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试用水印

## KLC433

### ■ Features

- Multi transverse mode
- $\Phi 5.6$  TO-CAN package
- Emitter size : 14um x 1um



### ■ Absolute maximum ratings

Item	Symbol	Value	Unit	Condition
Optical output power	Po	1.4	W	CW
Reverse voltage	Vr	5.0	V	-
Operating case temperature	Tc	0 to +50	°C	-
Storage temperature	Tstg	-40 to +85	°C	-

### ■ Electrical and optical characteristics

Tc=25±3 °C

Item	Symbol	Min.	Typ.	Max.	Unit	Condition	
Threshold current	Ith	-	0.13	0.20	A	CW	
Operating current	Iop	0.60	0.72	0.80	A	CW 1.2W	
Operating voltage	Vop	-	4.4	5.2	V	CW 1.2W	
Slope efficiency	Se	1.7	2.0	2.3	W/A	CW 0.2-1.2W	
Peak wavelength	$\lambda$	395	402	405	nm	CW 1.2W	
Beam divergence	Parallel	$\theta_h^{*1}$	8	12	20	deg	CW 1.2W
	Perpendicular	$\theta_v^{*1}$	40	44	48	deg	CW 1.2W
Angle accuracy of beam center	Parallel	$\theta_x$	-3	-	+3	deg	CW 1.2W
	Perpendicular	$\theta_y$	-3	-	+3	deg	CW 1.2W

\*1 : Full width at 1/e2 from peak intensity.

- Specification
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  - L-I, V-I
  - Wavelength
  - FFP
  - Aging test
  - ESD failure level

试用水印

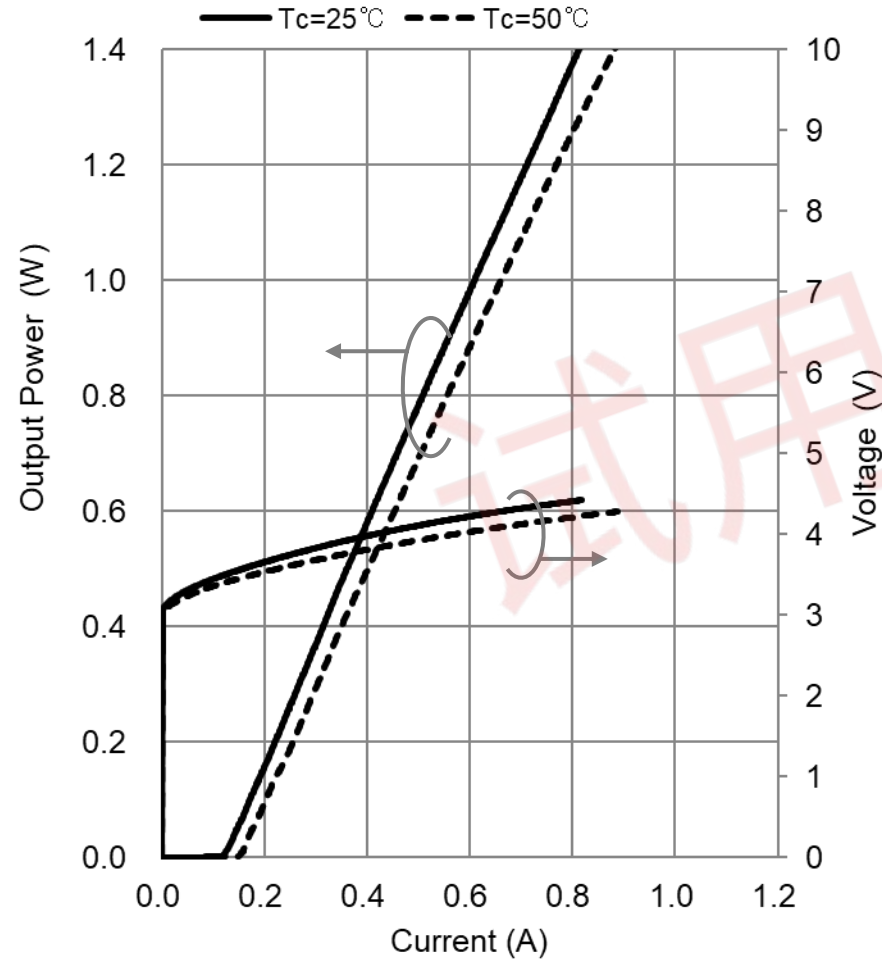


- Specification
- Outline, Pin connection
- **Technical data**
  - L-I, V-I
  - Wavelength
  - FFP
  - **ESD failure level**

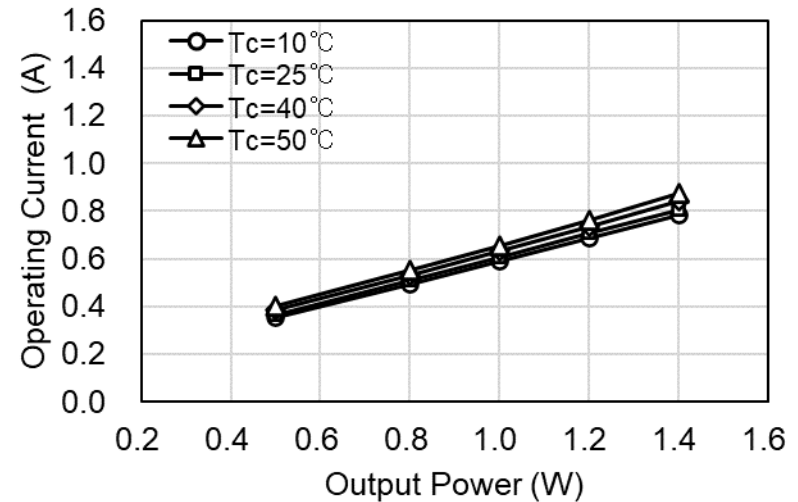
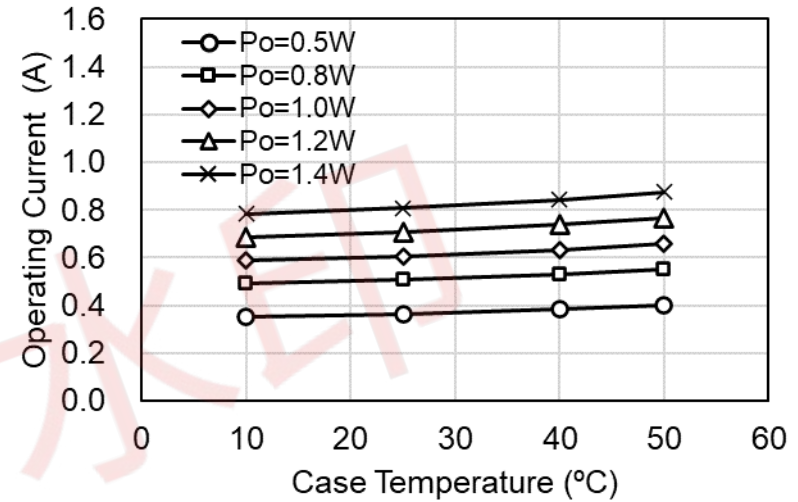
### L-I, V-I

[Conditions ]

CW

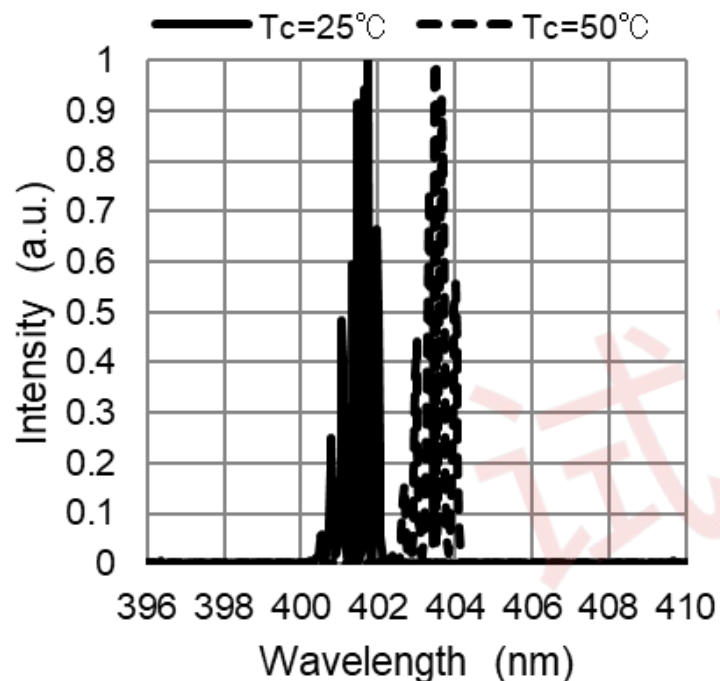


### Temperature and power dependence



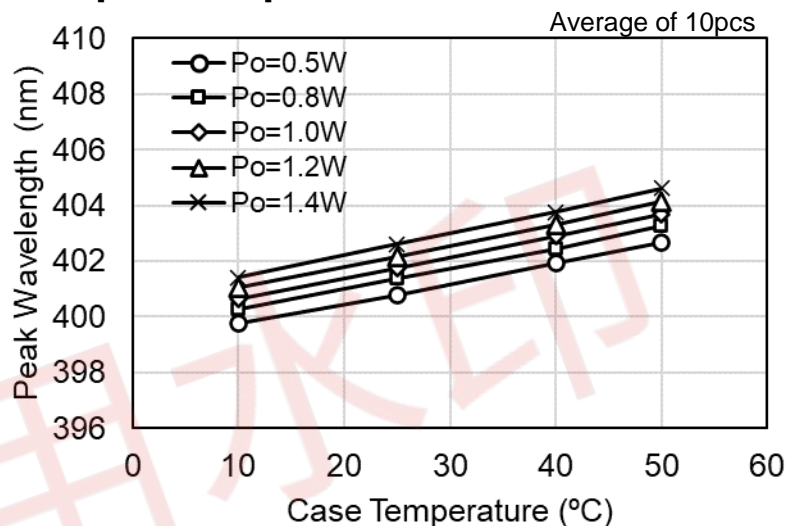
## Spectrum

[Conditions] CW, Po=1.2W

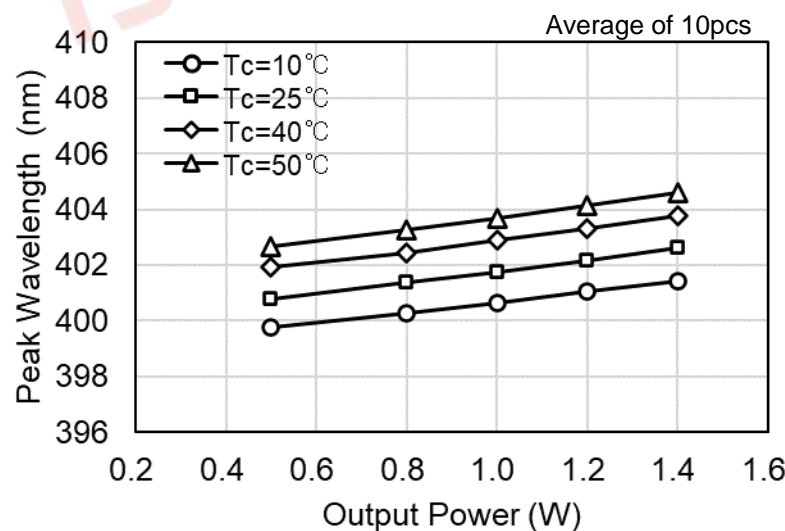


## Temperature and power dependence

[Conditions] CW



Po(W)	$\Delta$ (nm/°C)
0.5	0.073
0.8	0.074
1.0	0.076
1.2	0.077
1.4	0.080

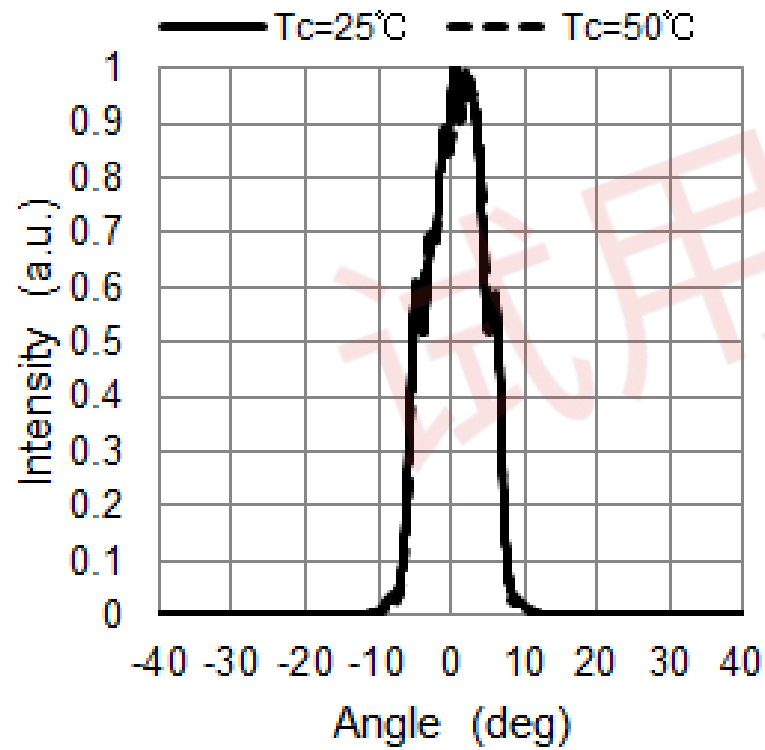


Tc(°C)	$\Delta$ (nm/W)
10	1.81
25	2.00
40	2.07
50	2.13

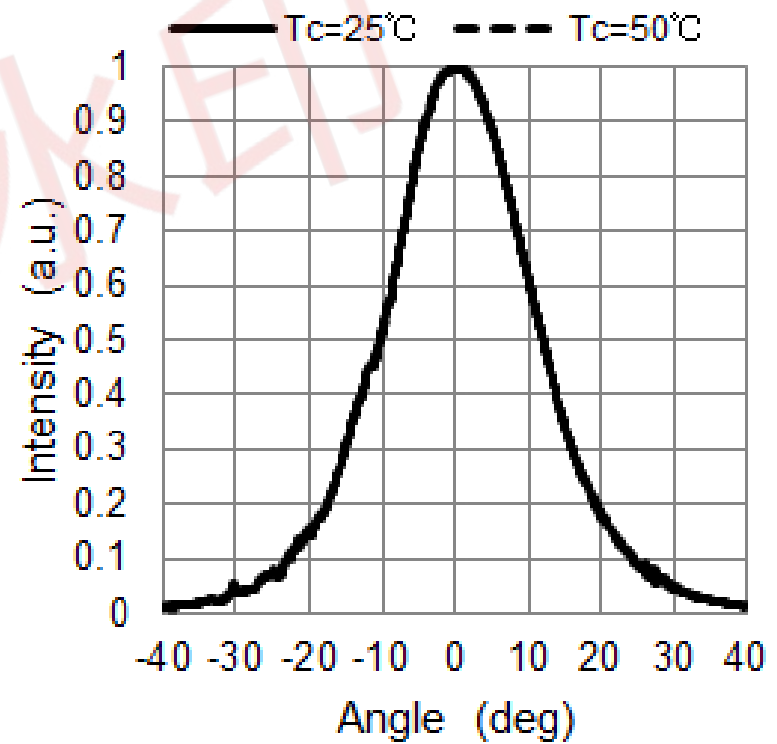
## ■ Far field pattern

[Conditions] CW,  $P_o=1.2W$

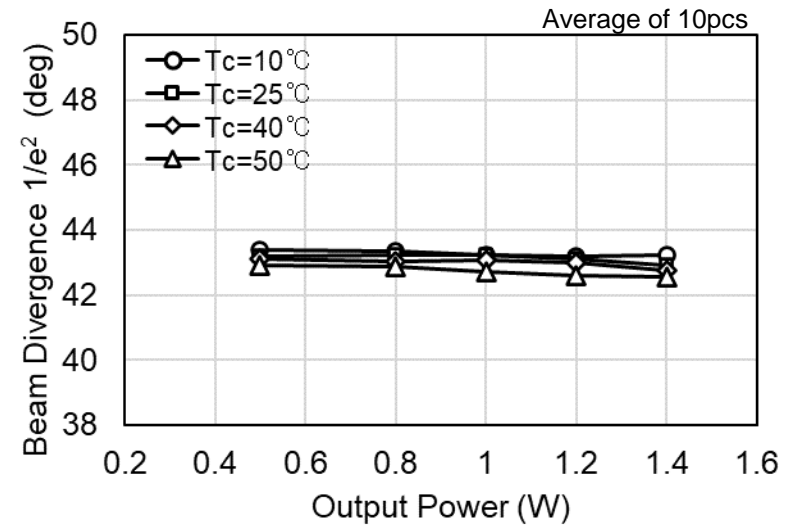
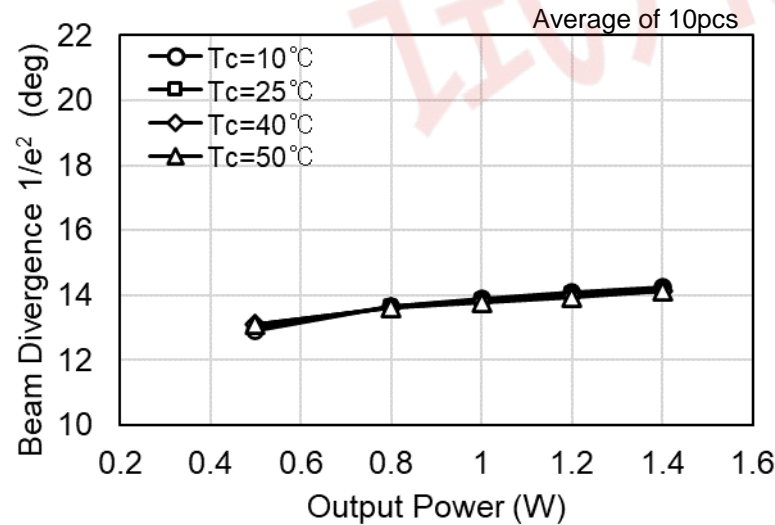
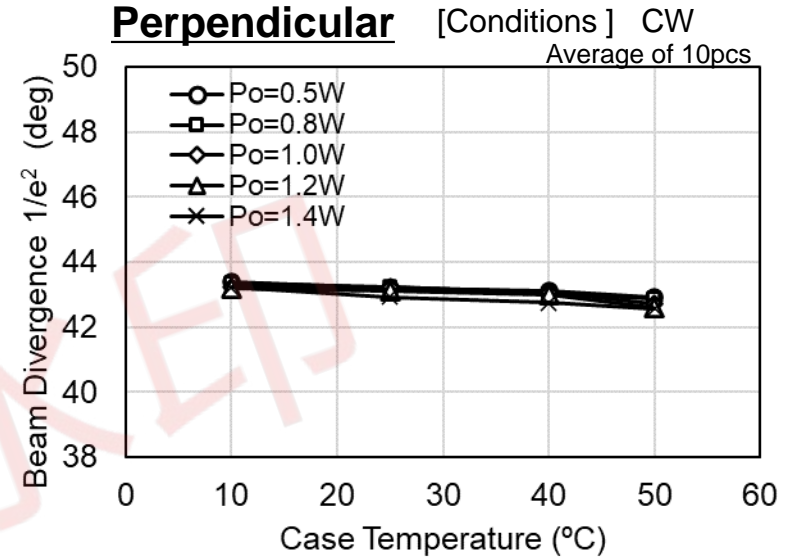
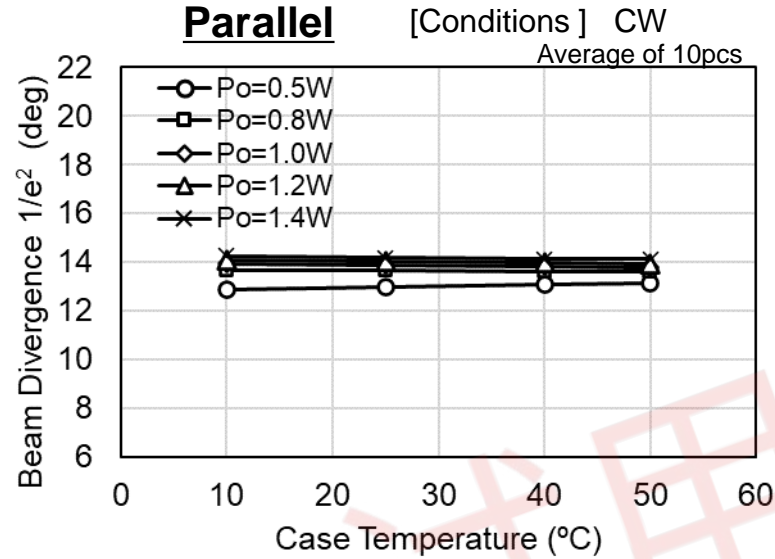
Parallel

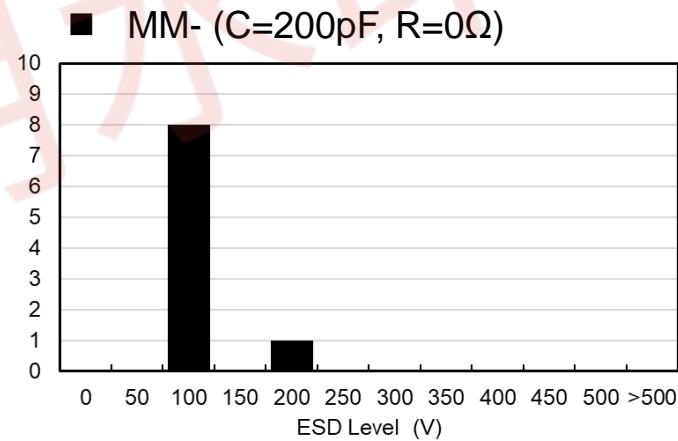
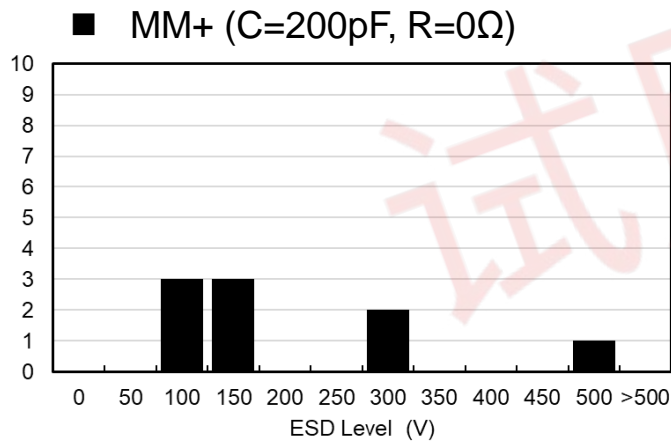
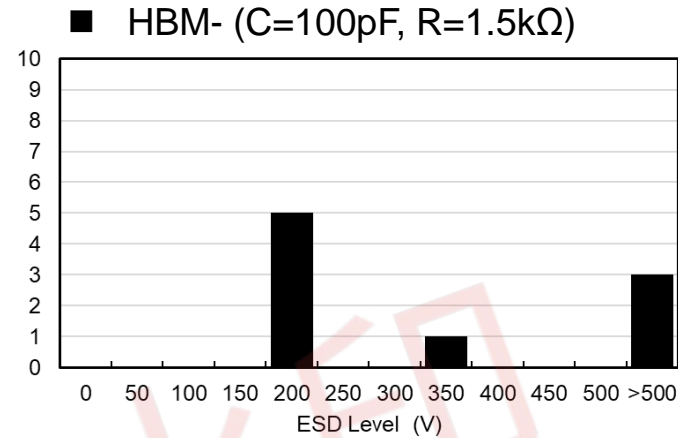
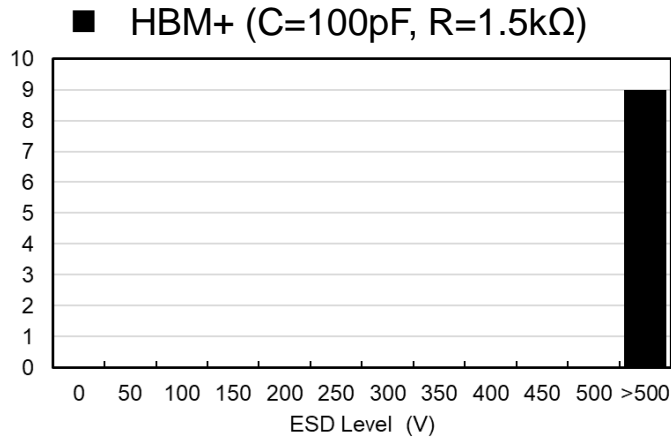


Perpendicular



## Temperature and power dependence





Generally, laser diode is one of the most sensitive devices against ESD and Electrical surge from outside. Special cares are necessary to handle it. If electric pulses that may cause optical emission exceed the optical power specified as absolute maximum ratings is applied, the laser will be damaged by its own light intensity, resulting in the catastrophic degradation in a short time. Therefore, all possible measures against ESD and electrical surge are strongly required in design stage and production line.