

R87-35GSE

1. Color	Infrared
2. Material	AlGaAs / Ge
3. Electrode	N side (cathode) : Au / P side (anode) : Au
4. Electrode pattern	(Figure 1)
5. Chip size	330 μ m \times 330 μ m \times 190 μ m (Figure 1)
6. Electro-Optical characteristics (Ta=25°C)	(Table 1)
7. Absolute maximum rating	(Table 2, Figure 2)
8. Technical data	
8-1. Characteristic curves	(Figure 3~9)
8-2. Reliability	(Figure 10~12)
9. Features	
- High power	
- Good reliability	
- Good temperature characteristics	

Figure 1. Electrode pattern and Chip size (Unit : μ m)

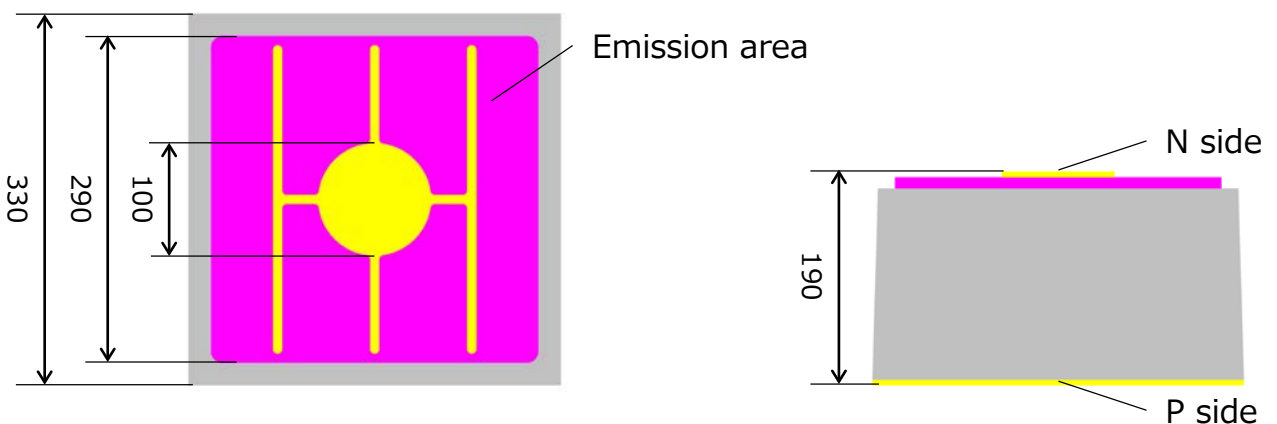


Table 1. Electro-Optical characteristics (Ta=25°C)

Parameters	Symbol	Condition	Min.	Typ.	Max.	Unit
Power*	Po	IF=20mA	5.6	8.0	10.2	mW
Forward Voltage	VF	IF=20mA	1.15	1.45	1.65	V
Peak Wavelength	λ_p	IF=20mA	860	870	880	nm
Reverse Current	IR	VR=5V	—	—	10	μ A

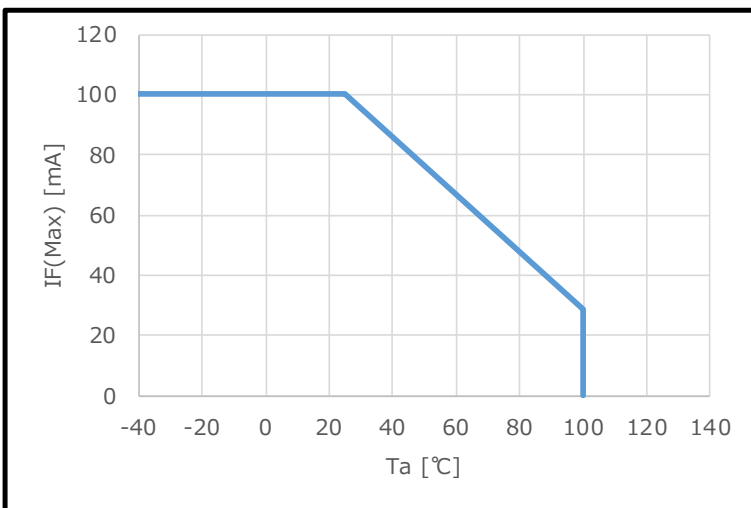
* Power : Measurement at SHOWA DENKO PHOTONICS.

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Table 2. Absolute maximum rating

Item	Symbol	Rating	Unit
Forward Current	IF	100	mA
Reverse Voltage	VR	5	V
Junction Temperature	Tj	130	°C

Figure 2. Ta-Absolute maximum rated current



SHOWA DENKO PHOTONICS' standard condition : LED chip mounted on TO-18 gold header, without resin coating.

* The absolute Maximum Rating means that there is a possibility to break down if exceeded momentarily, and does not guarantee to use on this condition considering reliability.

* You should establish the absolute Maximum Ratings of device after packaging under your responsibility, as those largely depend on the design of package and packaging condition.

The information contained herein is believed to be reliable. However, no representations, guaranties or warranties of any kind are made as to accuracy and suitability of the Product for particular applications or the results of its use. SHOWA DENKO PHOTONICS reserves the right to introduce changes without notice.

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Characteristic curves (TO-18 stem without resin)

Figure 3. IF-Po (Ta=25°C)

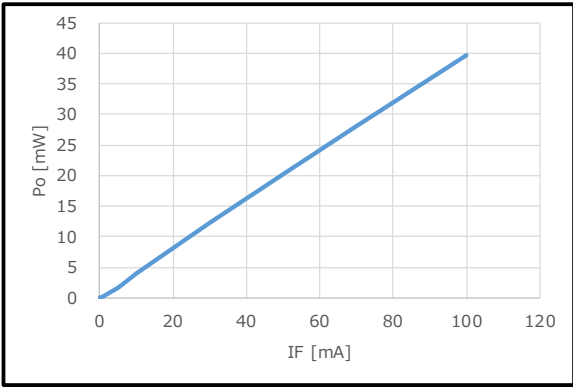


Figure 7. Ta-Relative Po

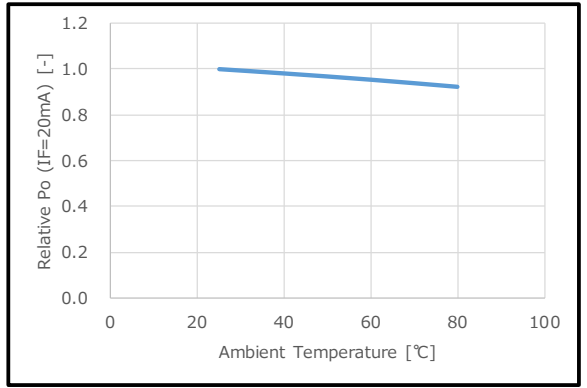


Figure 4. VF-IF (Ta=25°C)

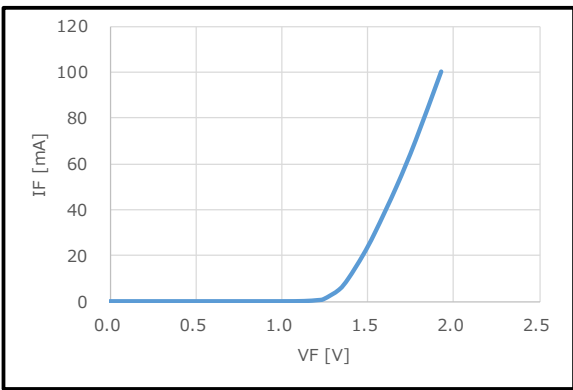


Figure 8. Ta-VF

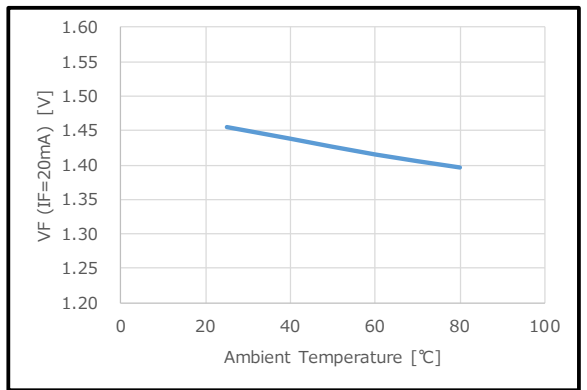


Figure 5. Emission spectrum (Ta=25°C)

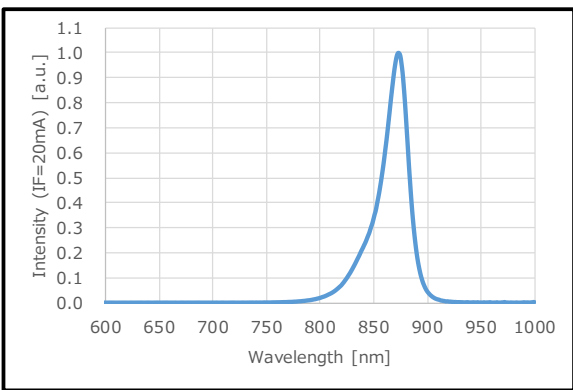


Figure 9. Ta-λp

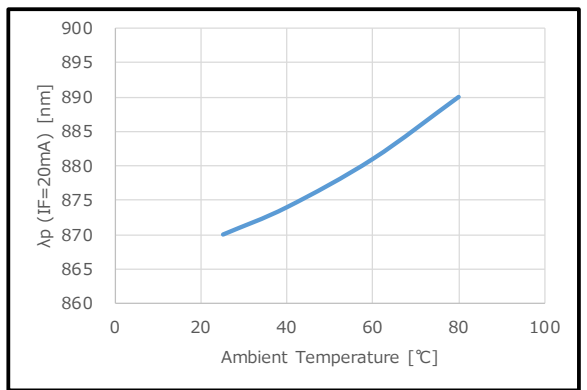
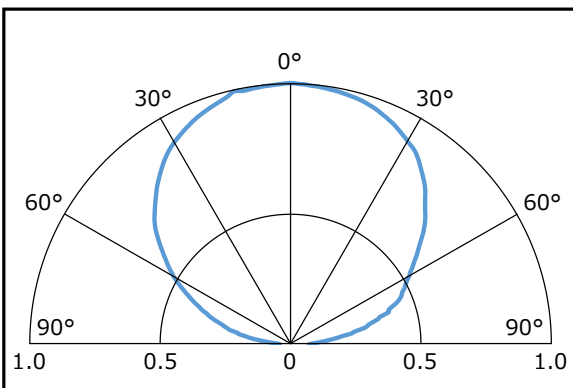


Figure 6. Emission distribution (Ta=25°C)



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Reliability (TO-18 stem without resin)

Figure 10. 25°C Pulse 100mA 1,000h test
(Pules width:22μs, Pulse period:264μs)

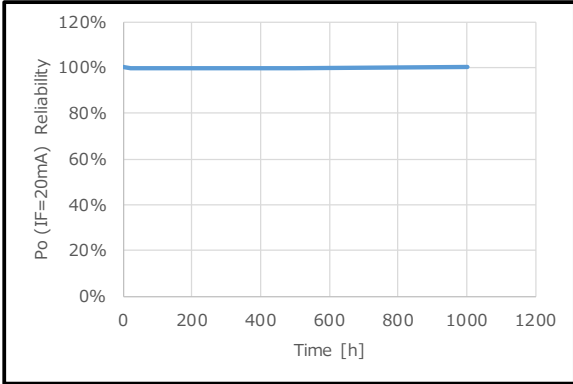


Figure 11. 25°C Pulse 300mA 1,000h test
(Pules width:22μs, Pulse period:264μs)

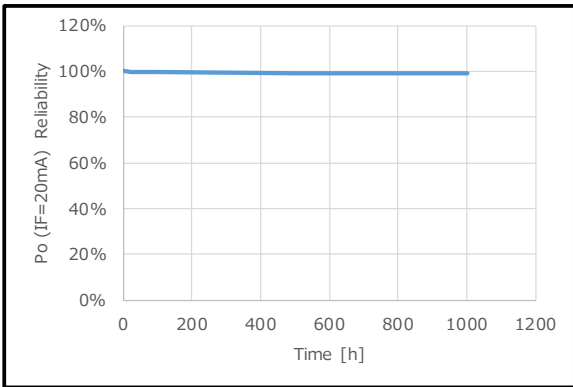


Figure 12. 25°C Pulse 500mA 1,000h test
(Pules width:22μs, Pulse period:264μs)

