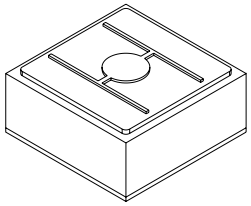
ODI1313TF.S1-850

OS-CORE® AlGaAs



Features:

- Polarity: n-side up
- Chip technology: IR Thinfilm
- Color: ● infrared (850 nm)
- Chipsize: 13 mil x 13 mil

Ordering Information

Type	Ordering Code
ODI1313TF.S1-850-MM-MM-1-C	Q65112A8143

Maximum Ratings

Parameter	Symbol		Values
Operating Temperature	T_{op}	min. max.	-40 °C 125 °C
Storage Temperature [1]	T_{stg}	min. max.	-40 °C 125 °C
Recommended Die Storage Temperature ≤ 60% RH	$T_{stg\ die}$	max.	30 °C
Junction Temperature	T_j	max.	145 °C
Forward Current T_J = 25 °C	I_F	max.	100 mA
Forward Current Pulsed t ≤ 10 µs; D = 0.005 ; T_J = 25 °C	$I_{F\ pulse}$	max.	1200 mA
Reverse voltage [2] T_J = 25 °C	V_R	max.	5 V

Characteristics

I_F = 70 mA; T_J = 25 °C

Parameter	Symbol		Values
Centroid Wavelength [3] I_F = 70 mA	$\lambda_{centroid}$	min. max.	840 nm 860 nm
Forward Voltage [4] I_F = 150 mA	V_F	min. typ. max.	2.50 V 3.20 V 3.30 V
Temperature coefficient of brightness	TC_I	typ.	-0.5 % / K
Temperature coefficient of voltage	TC_V	typ.	-2 mV / K
Temperature coefficient of wavelength	TC_λ	typ.	0.3 nm / K

Additional Information

Die bonding	Metalization frontside	Metalization backside
Adhesive bonding	Gold	Gold

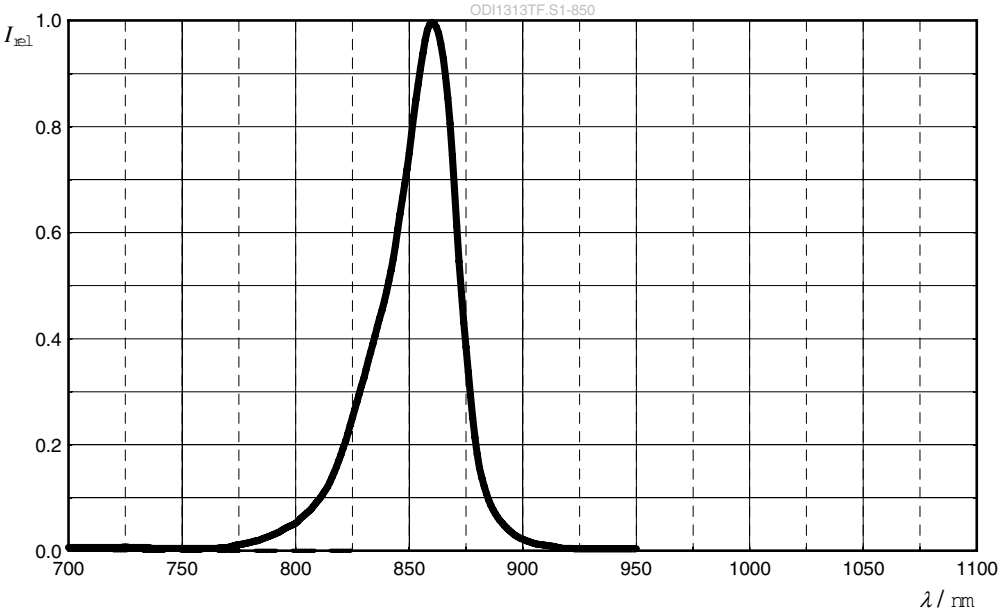
Brightness and Wavelength Groups [5)3)]

I_F = 70 mA

Radiant Intensity I_e a. u.	Centroid Wavelength $\lambda_{centroid}$ nm 840 - 860
4 - 15	J40

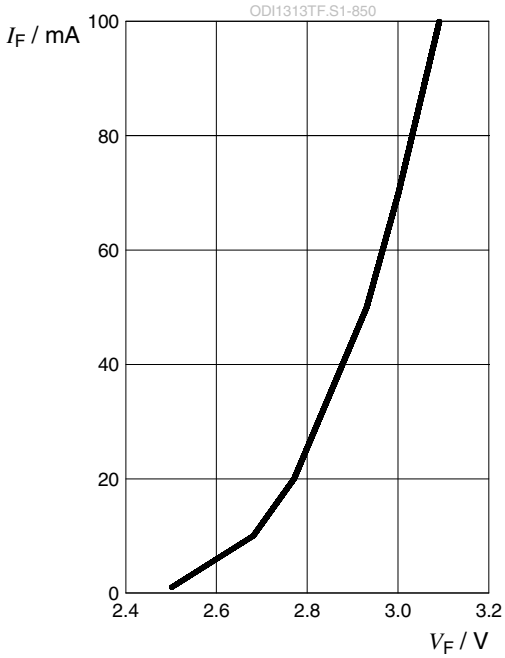
Relative Spectral Emission [6)]

$I_{rel} = f(\lambda)$; $I_F = 70$ mA; $T_S = 25$ °C



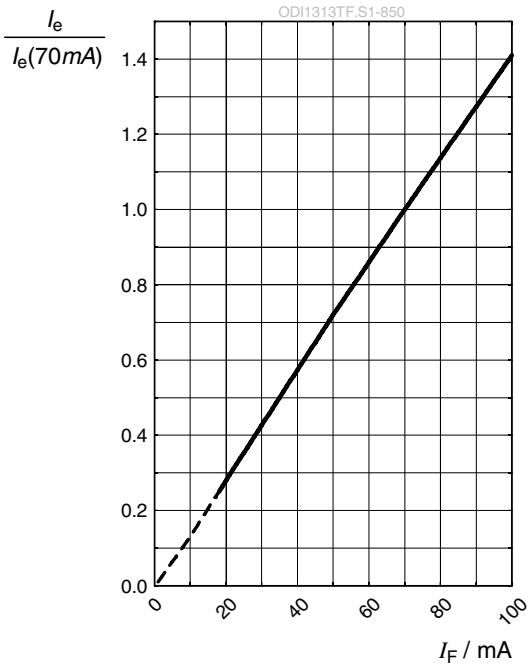
Forward current [6]

$I_F = f(V_F)$; T_S = 25 °C

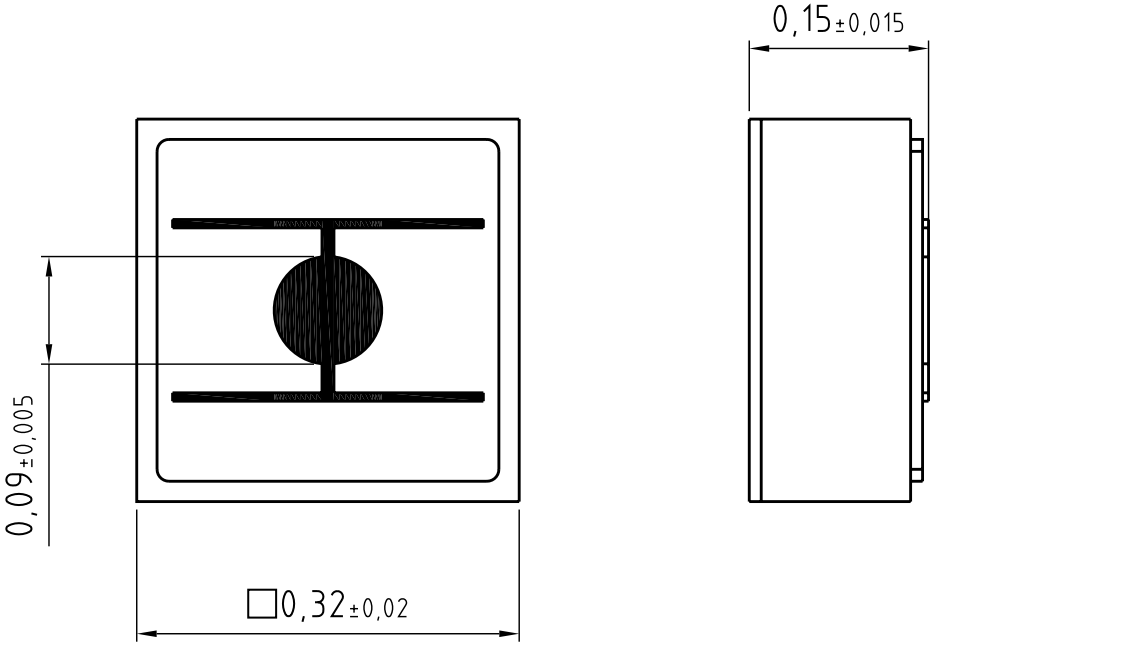


Relative Radiant Intensity [6], [7]

$I_E/I_E(70\ mA) = f(I_F)$; T_S = 25 °C



Dimensional Drawing [8)]



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Glossary

1) **Shelf life:** Temperature refer solely to storage of finished LED product (Not valid for chip on die sheet).

2) **Reverse Operation:** Reverse Operation of 10 hours is permissible in total. Continuous reverse operation is not allowed.

3) **Wavelength:** The wavelength is measured at a current pulse of typically 10 ms and with an internal reproducibility of ± 1 nm (with a coverage factor of k = 3).

4) **Forward Voltage:** The forward voltage is measured during a current pulse of typically 5 ms and with an internal reproducibility of ± 0.1 V (with a coverage factor of k = 3).

5) **Brightness:** Brightness values are measured during a current pulse of typically 10 ms and with an internal reproducibility of ± 8 % (with a coverage factor of k = 3).

6) **Typical Values:** Due to the special conditions of the manufacturing processes of semiconductor devices, the typical data or calculated correlations of technical parameters can only reflect statistical figures. These do not necessarily correspond to the actual parameters of each single product, which could differ from the typical data and calculated correlations or the typical characteristic line. If requested, e.g. because of technical improvements, these typ. data will be changed without any further notice.

7) **Characteristic curve:** In the range where the line of the graph is broken, you must expect higher differences between single devices within one packing unit.

8) **Tolerance of Measure:** Unless otherwise noted in drawing, tolerances are specified with ±0.1 and dimensions are specified in mm.

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