Data Sheet

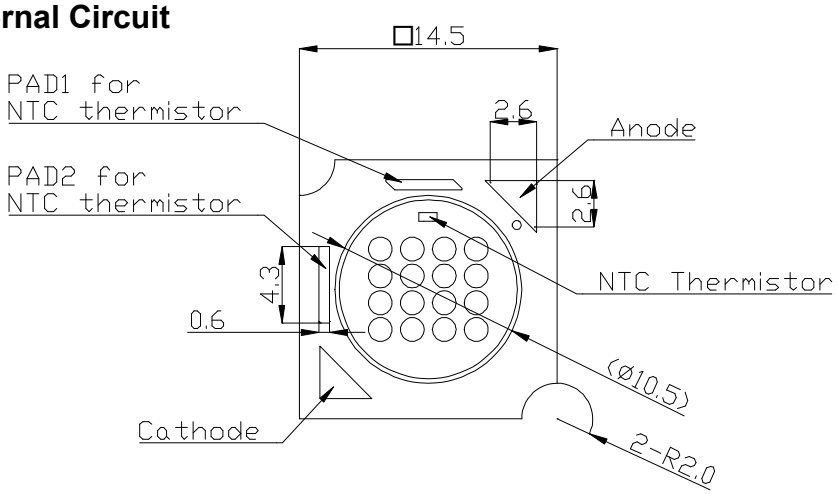
2022.06

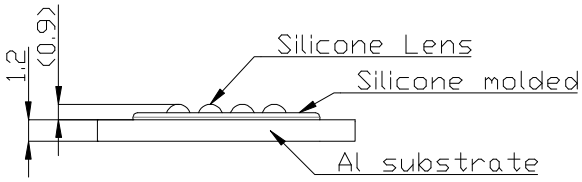
PRELIMINARY

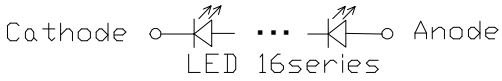
# COB1050GD-16100S-WPL

COB type LED

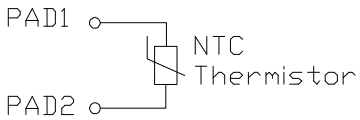
## Outline and Internal Circuit




(Unit : mm)




## Feature

- Chip Material : GaAs
- Chip Dimension : 1000um * 1000um
- Number of Chips : 16pcs
- Peak Wavelength : 1050nm typ.
- Lead Frame Die : Aluminum
- Lens : Silicone resin

## Absolute Maximum Ratings (Tc=25°C)

| Item | Symbol | Ratings | Unit |
|---|---|---|---|
| Power Dissipation | PD | 30 | W |
| Forward Current | IF | 1000 | mA |
| Pulse Forward Current | IFP | 2000 | mA |
| Reverse Voltage | VR | 80 | V |
| Thermal Resistance | Rthjs | 5 | K/W |
| Junction Temperature | Tj | 120 | °C |
| Operating Temperature | Topr | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +100 | °C |
| Soldering Temperature | TSOL | 250 | °C |

‡Soldering condition : Refer to technical support information on the website.

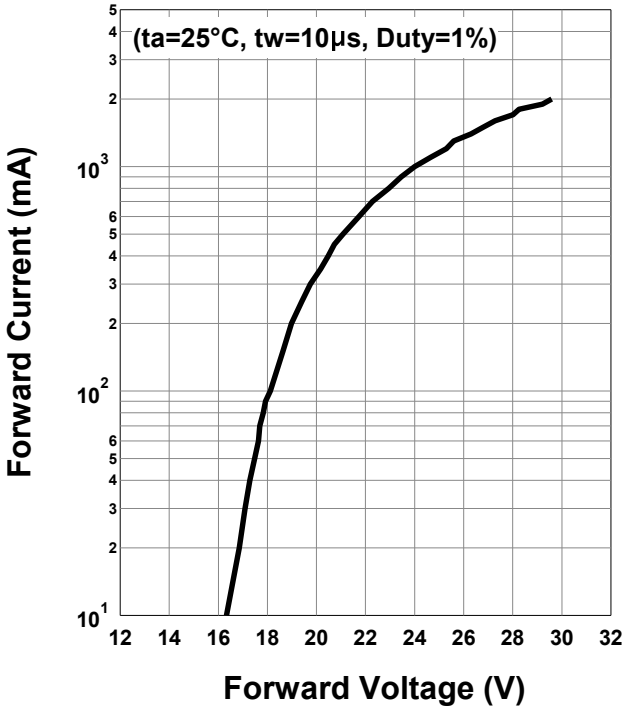
## Optical and Electrical Characteristics (Tc=25°C)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Forward Voltage | VF | | 24 | (30) | V | IF=1A<br>t=20ms |
| Reverse Current | IR | | | 10 | uA | VR=80V |
| Total Radiated Power | PO | | (8.0) | | W | IF=1A<br>t=20ms |
| Peak Wavelength | λp | 1030 | | 1070 | nm | IF=1A<br>t=20ms |
| Half Width | Δλ | | 50 | | nm | IF=1A<br>t=20ms |
| Viewing Half Angle | θ1/2 | | ±62 | | deg. | IF=100mA |
| Rise Time | tr | | 10 | | ns | IF=1A |
| Fall Time | tf | | 20 | | ns | IF=1A |

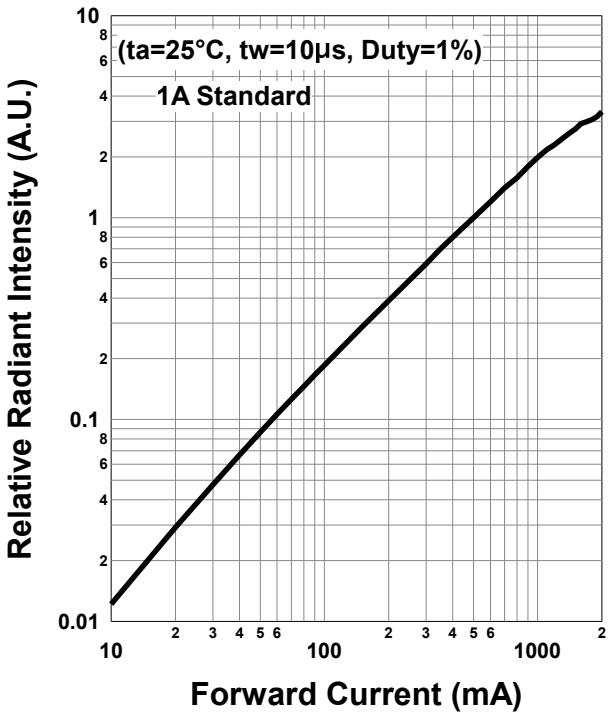
‡ Radiated Power is measured by G8370-85.

## Typical Characteristic Curves

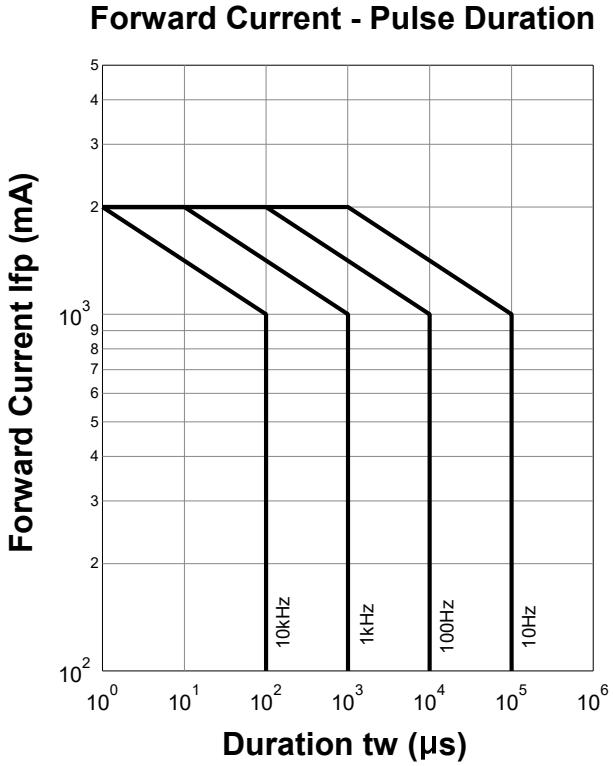
### Forward Current - Forward Voltage

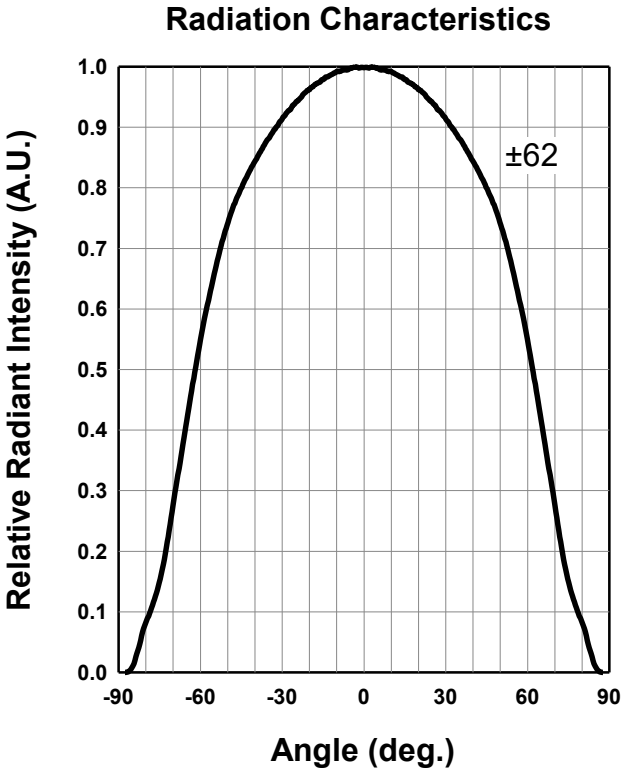


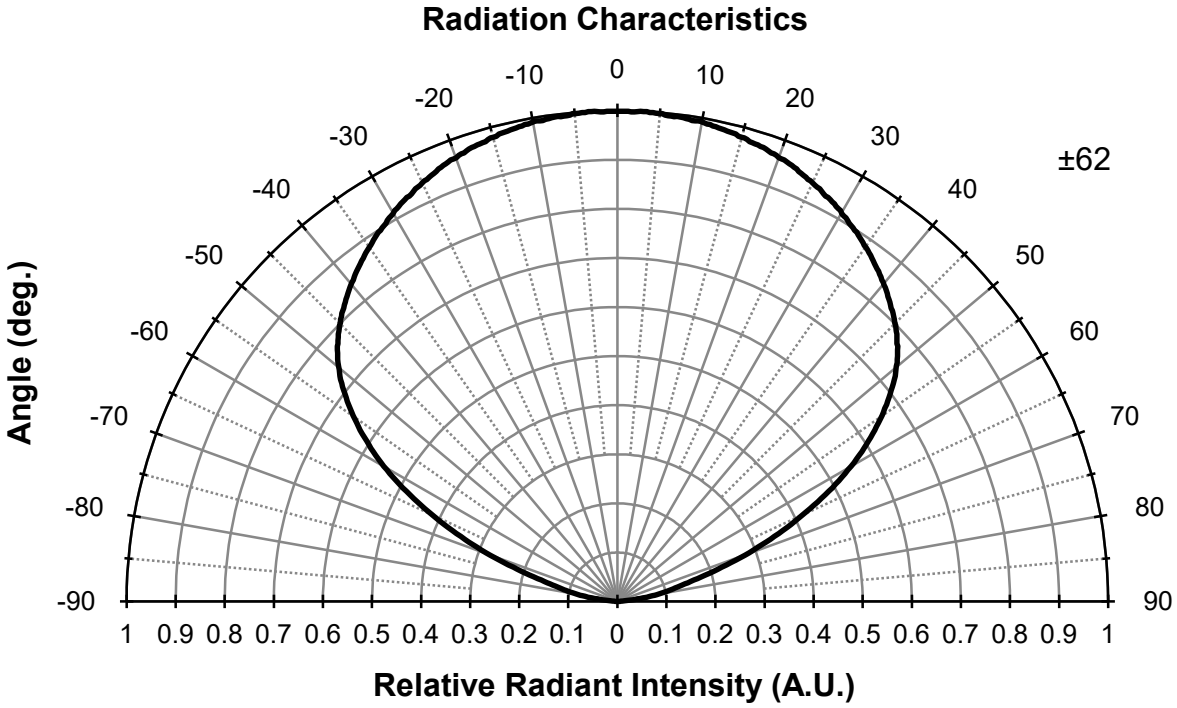

### Relative Radiant Intensity - Forward Current



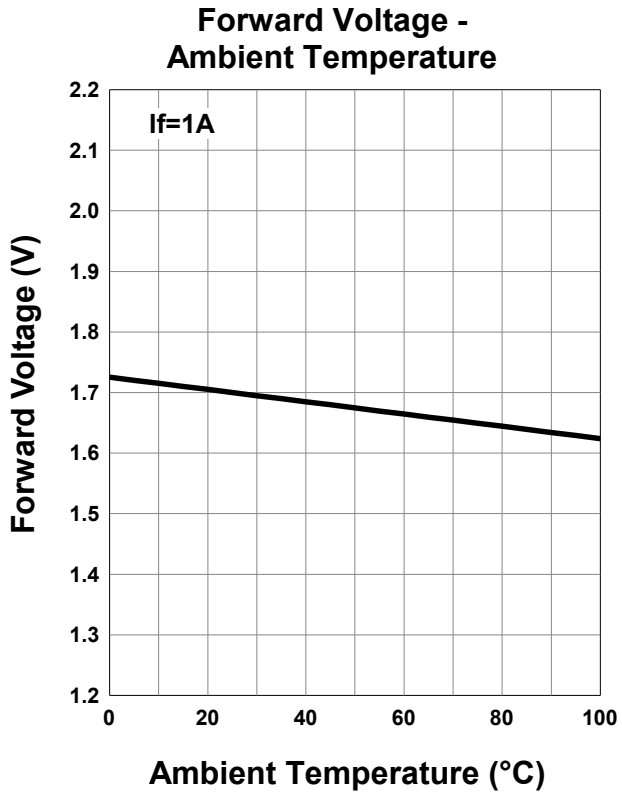

### Forward Current - Pulse Duration

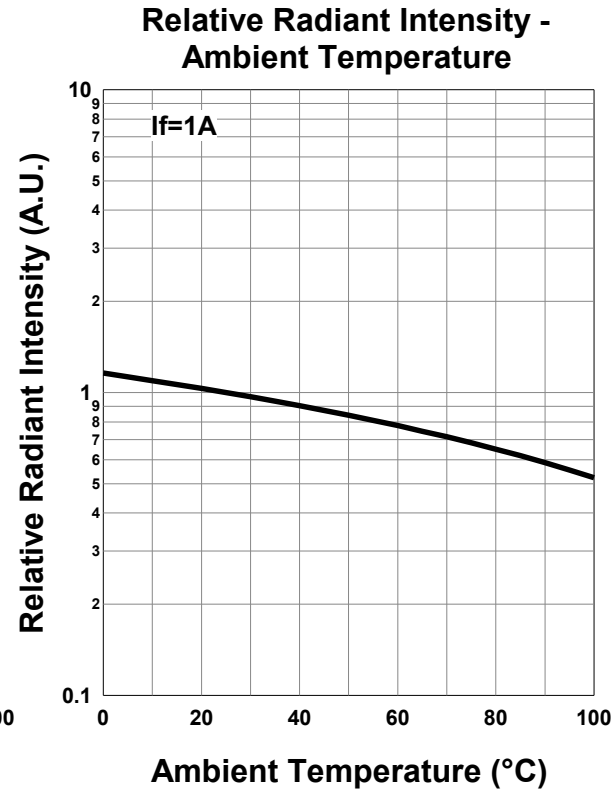


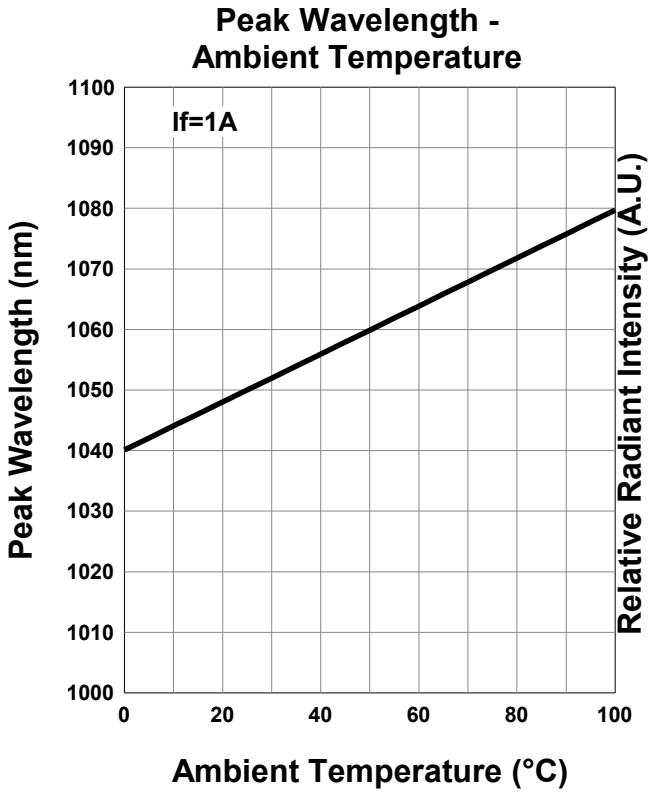

Radiation Characteristics
Relative Radiant Intensity (A.U.)
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
±62
-90
-60
-30
0
30
60
90
Angle (deg.)

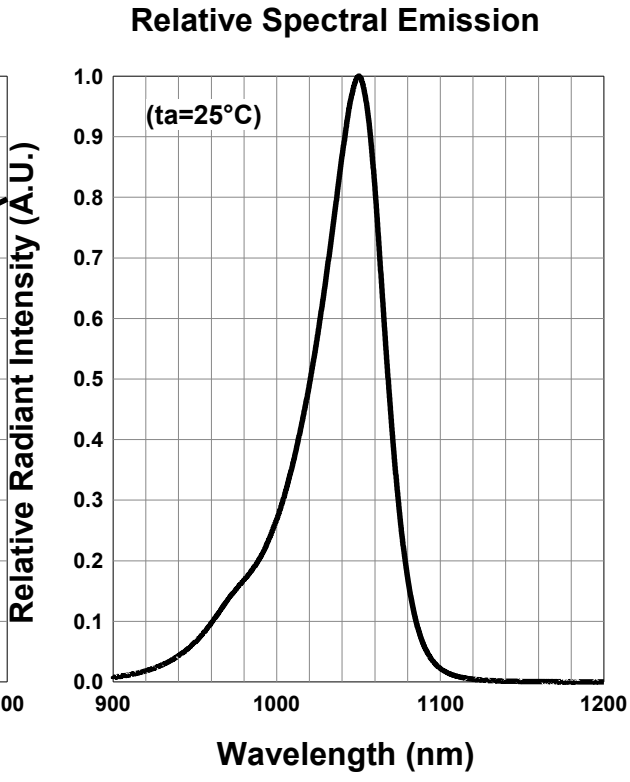

Radiation Characteristics
0
-10
10
-20
20
-30
30
-40
40
-50
50
-60
60
-70
70
-80
80
-90
90
±62
Angle (deg.)
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1
Relative Radiant Intensity (A.U.)

Below is the sampling data of a single chip.



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