



THE DATASHEET OF ASMT-CB20



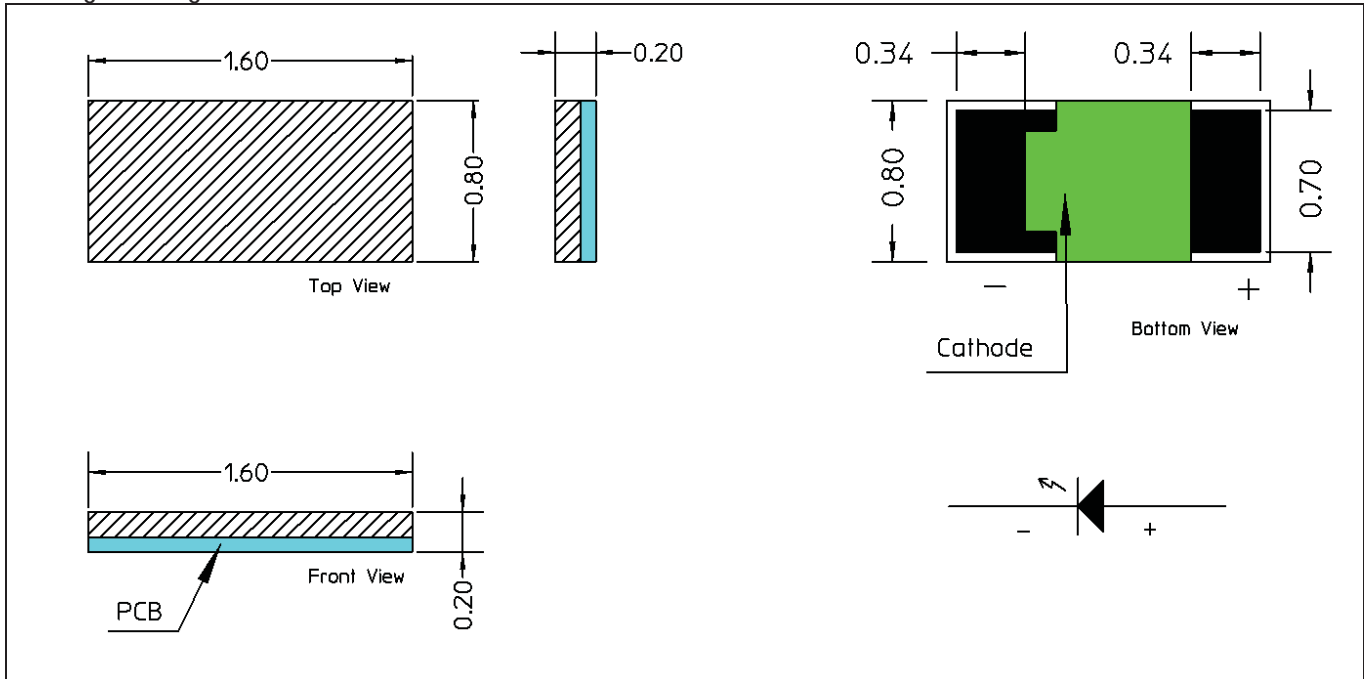
ASMT-CB20

SMT Top Fire ChipLED

Data Sheet



Package Drawing



- All dimensions in millimeters.
- Tolerance is ± 0.1 mm unless otherwise specified.
- Electrode Ag plated.

Device Selection Guide

| Part Number | Color | Chip |
|-------------|-------|-------|
| ASMT-CB20 | Blue | InGaN |

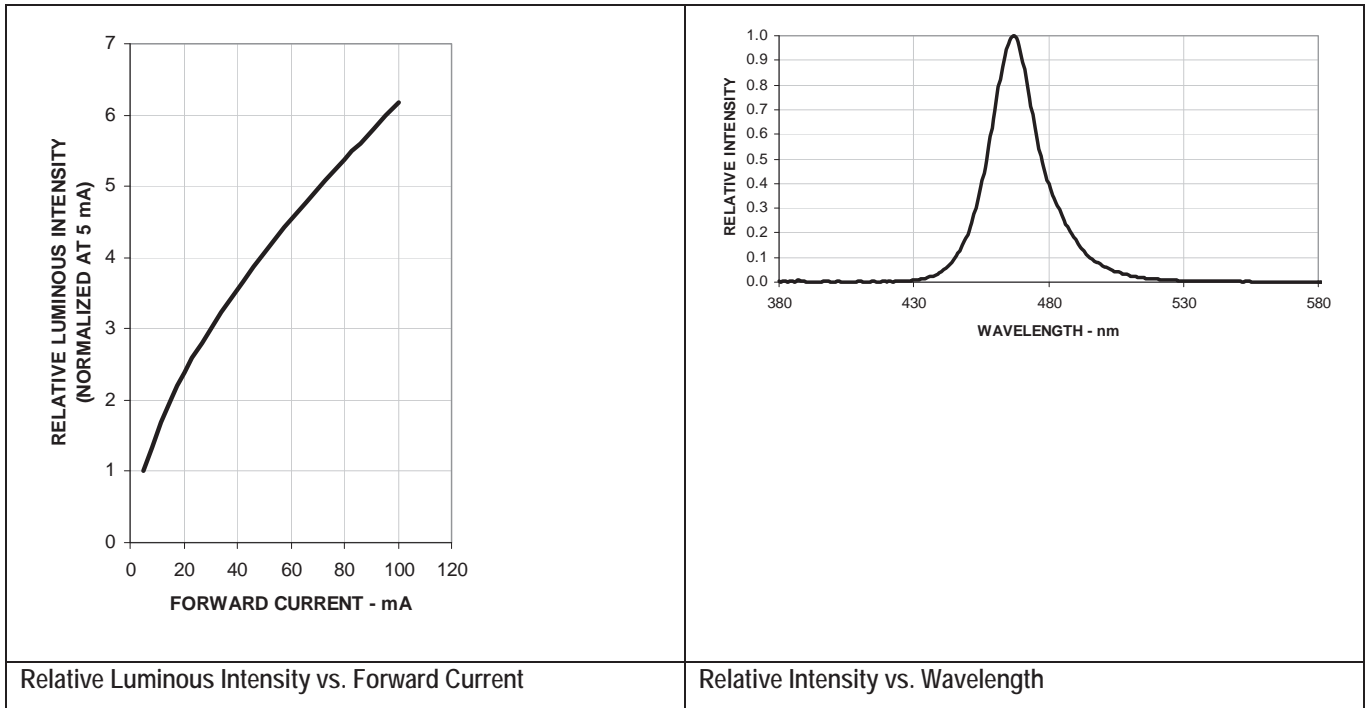
CAUTION: Class 1B static sensitive device per JESD22A114. Please observe appropriate precautions during handling and processing.

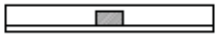
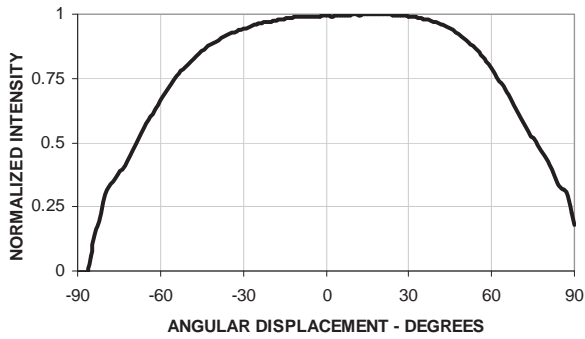
Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$

| Parameter | Rating | Unit |
|--|------------|------------------|
| DC Forward Current | 10 | mA |
| Power Dissipation | 32 | mW |
| Operating Temperature | -40 to +85 | $^\circ\text{C}$ |
| Storage Temperature | -40 to +85 | $^\circ\text{C}$ |
| Moisture Sensitivity Level (IPC/JEDEC JSTD020) | 2A | - |

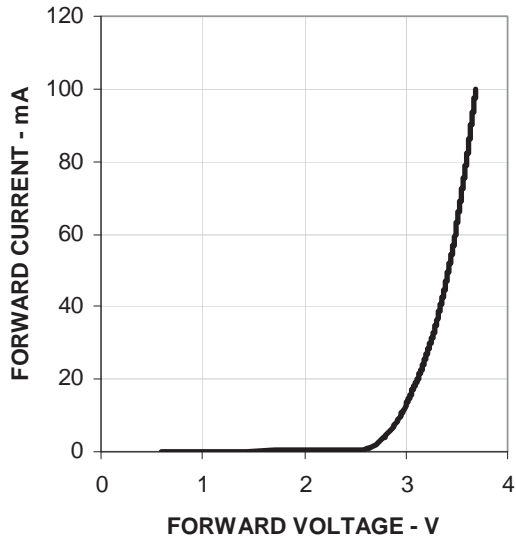
Optical-Electrical Characteristics at $T_A = 25^\circ\text{C}$

| Parameter | Test condition | Rating | | | Unit |
|-------------------------------------|------------------|--------|------|------|------|
| | | Min | Typ | Max | |
| Luminous intensity (I_v) | $I_F=5\text{mA}$ | 11.2 | 25.0 | 71.5 | mcd |
| Viewing Angle ($2\theta_{1/2}$) | $I_F=5\text{mA}$ | | 130 | | deg. |
| Peak wavelength (λ_p) | $I_F=5\text{mA}$ | | 468 | | nm |
| Dominant wavelength (λ_d) | $I_F=5\text{mA}$ | 465 | | 475 | nm |
| Forward voltage (V_F) | $I_F=5\text{mA}$ | 2.55 | | 3.15 | V |

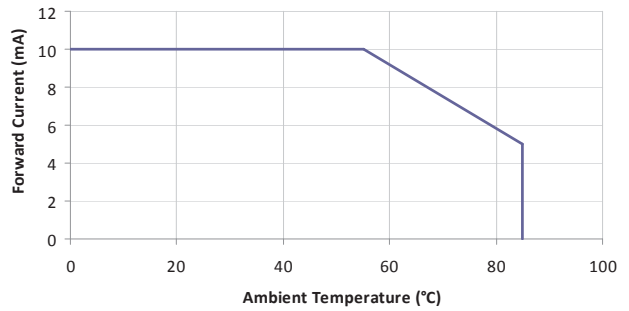




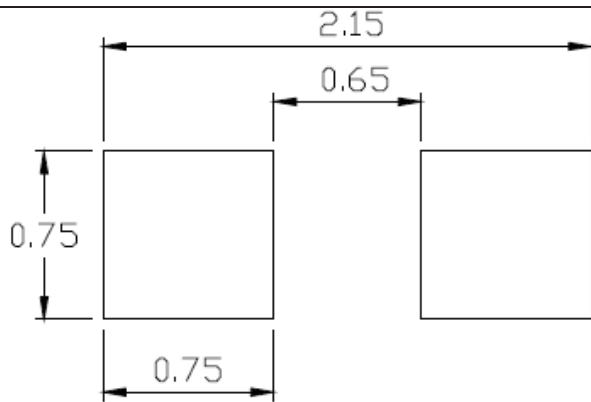
Radiation Pattern



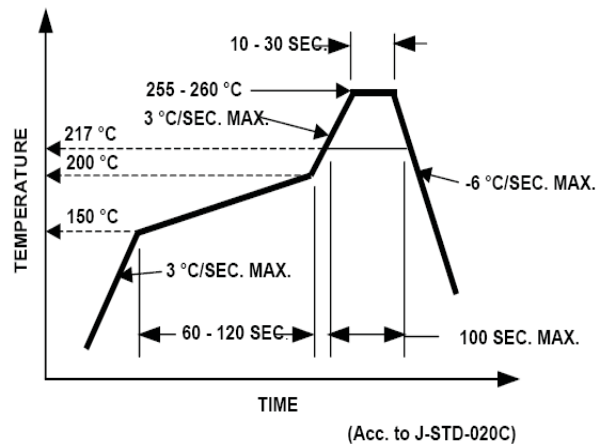
Forward Current vs. Forward Voltage



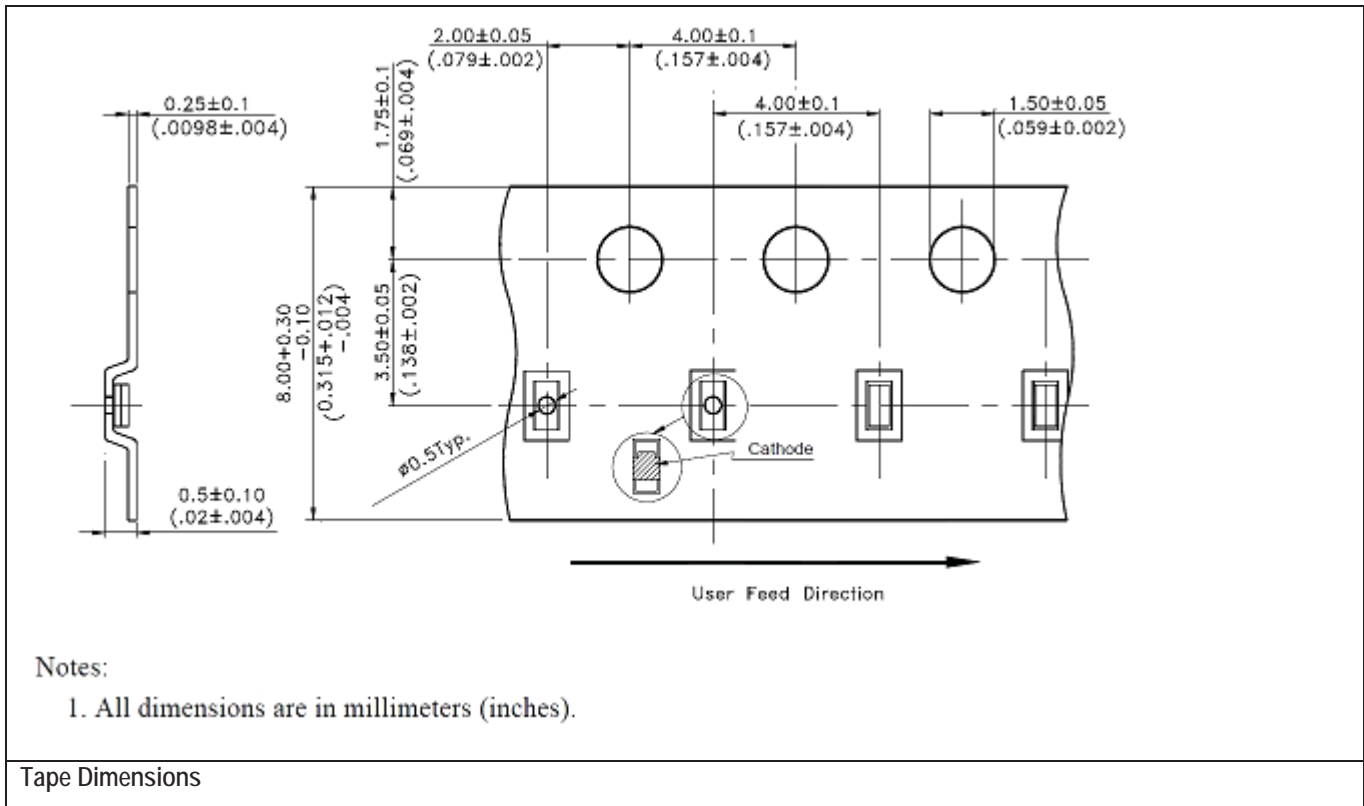
Forward Current vs. Ambient Temperature



Recommended Soldering Land Pattern



Recommended Pb-Free Reflow Soldering Profile



Tape Dimensions

Luminous Intensity Bin

| Bin | Min (mcd) | Max (mcd) |
|-----|-----------|-----------|
| L | 11.2 | 18.0 |
| M | 18.0 | 28.5 |
| N | 28.5 | 45.0 |
| P | 45.0 | 71.5 |

Tolerance $\pm 15\%$

Color Bin

| Bin | Min (nm) | Max (nm) |
|-----|----------|----------|
| B | 465 | 470 |
| C | 470 | 475 |

Tolerance $\pm 1\text{nm}$

Forward Voltage Bin

| Bin | Min (V) | Max (V) |
|-----|---------|---------|
| 1 | 2.55 | 2.75 |
| 2 | 2.75 | 2.95 |
| 3 | 2.95 | 3.15 |

Tolerance $\pm 0.1\text{V}$

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 [Broadcom Limited](#) Information

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