The ELLS-405 series is a large 10.00 mm ( 0.39 ") high seven segment display designed for viewing distances up to 7 meters.


| PART NO. | Chip |  | $* *$ |
| :---: | :---: | :---: | :---: |
|  | Mace Color |  |  |
| ELLS-405GWA | GaP | Emitted Color |  |

Absolute Maximum Ratings at $\mathrm{T}_{\mathrm{a}}=\mathbf{2 5}{ }^{\circ} \mathrm{C}$

| Parameter | Symbol | Rating | Units |
| :---: | :---: | :---: | :---: |
| Forward Current | $\mathrm{I}_{\mathrm{F}}$ | 15 | mA |
| Operating Temperature | $\mathrm{T}_{\mathrm{opr}}$ | -40 to +85 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature | $\mathrm{T}_{\text {stg }}$ | -40 to +100 | ${ }^{\circ} \mathrm{C}$ |
| Soldering Temperature | $\mathrm{T}_{\text {sol }}$ | 260 (for $\leq 5 \mathrm{sec}$ ) | ${ }^{\circ} \mathrm{C}$ |
| Power Dissipation | $\mathrm{P}_{\mathrm{d}}$ | 40 | mW |
| Pulse Forward Current <br> (Pulse Width $\leqq 10$ msec and Duty $\leqq 1 / 10)$ | $\mathrm{I}_{\mathrm{FP}}$ | 70 | mA |
| Reverse Voltage | $\mathrm{V}_{\mathrm{R}}$ | 5 | V |

Electronic Optical Characteristics

| Parameter |  | Symbol | Min. | Typ. | Max. | Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition |  |  |  |  |  |  |
| Luminous <br> Intensity | Per segment | Per decimal <br> point | $\mathrm{I}_{\mathrm{V}}$ | 0.18 | 0.90 | - |
|  |  |  |  | - | mcd | $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}$ |
| Peak Wavelength | $\lambda_{\mathrm{p}}$ | - | 565 | - | nm | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ |
| Dominant Wavelength | $\lambda_{\mathrm{d}}$ | - | 570 | - | nm | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ |
| Spectrum Radiation <br> Bandwidth | $\Delta \lambda$ | - | 30 | - | nm | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ |
| Forward Voltage | $\mathrm{V}_{\mathrm{F}}$ | - | 3.0 | - | V | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ |
| Reverse Current | $\mathrm{I}_{\mathrm{R}}$ | - |  | 10 | $\mu \mathrm{~A}$ | $\mathrm{~V}_{\mathrm{R}}=5 \mathrm{~V}$ |

