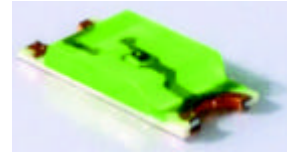




ISO 9001 : 2000

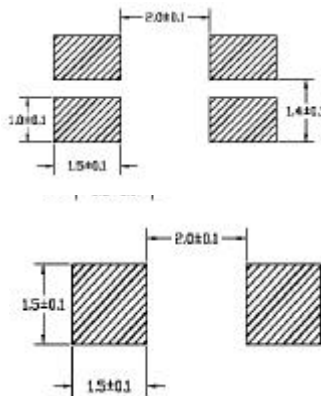
ULTRA-Thin LEDs for membrane switches



- 0,5mm high
- Size : 3.2 x 1.6 x 0.5mm
- Single and Bi-color

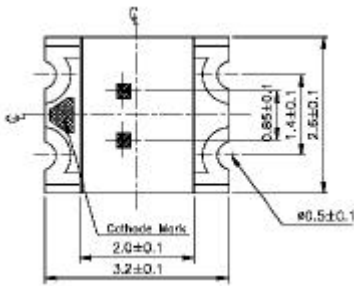
Values Ta = 25°C
Absolute Maximum Ratings

| Current | Rating |
|---|----------------------|
| Reverse voltage (VR) | 5V |
| Forward current (IF) | 25 mA |
| Operating temperature (Topr) | -40 +85°C |
| Storage temperature (Tst) | -40 +90°C |
| Soldering temperature (Tsol) | 260°C sur 5 secondes |
| Electrostatic Discharge (ESD) | 2000 V |
| Power Dissipation (Pd) | 60 mW |
| Peak Forward Current (1/10 @ 1KHz) (IF) | 160 mA |

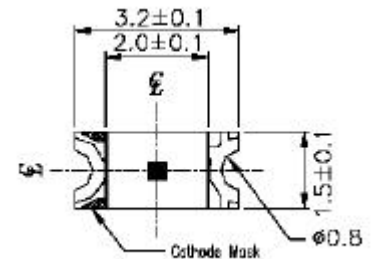
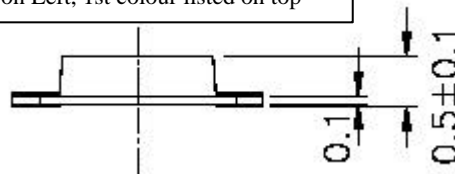


Features and Applications

- 0.5mm high**
- Overall size : 3.2 x 1.6 x 0.5mm**
- Reduce spacer thickness and/or eliminate embossing**
- 8mm tape & reel for automated pick & place machines**
- Available from stock**
- Packaging by reel of 2 000 LEDs**



Bicolor LED note : Cathode Mark on Left, 1st colour listed on top



| Part Number | Lens | Lighting Colour | VF | | | Die Material | Wave-Length (nm) | | Iv (mcd) @20 mA | | | Viewing Angle |
|-------------|-----------------|-----------------|---------|---------|----------|--------------|------------------|------------|-----------------|------------|------------|---------------|
| | | | IF (mA) | Typ (V) | Max. (V) | | Max. | Typ. | IF (mA) | Min. (mcd) | Typ. (mcd) | |
| ZUR55W-05 | Water clear | Red | 20 | 2.0 | 2.4 | AlGaInP | 632 | 624 | 20 | 14 | 37 | 140 |
| ZUO55W-05 | Water clear | Orange | 20 | 2.0 | 2.4 | AlGaInP | 611 | 605 | 20 | 11 | 30 | 140 |
| ZUY55W-05 | Water clear | Yellow | 20 | 2.0 | 2.4 | AlGaInP | 591 | 589 | 20 | 14 | 38 | 140 |
| ZMG55W-05 | Water clear | Green | 20 | 2.0 | 2.4 | AlGaInP | 575 | 573 | 20 | 9 | 14 | 140 |
| ZUB55W-05 | Water clear | Blue | 25 | 3.5 | 4.3 | InGaN | - | 470 | 20 | 2.6 | 7 | 140 |
| ZPW55D-05 | Yellow diffused | White | 25 | - | 3.15 | InGaN | - | - | - | 45 | 112 | 140 |
| BURMG57W-05 | Water clear | Red Green | - | - | - | AlGaInP | - | 624 573 | - | 14 9 | 37 14 | 130 |
| BUYMG57W-05 | Water clear | Yellow Green | - | - | - | AlGaInP | - | 589 573 | - | 14 9 | 38 14 | 130 |
| BURUY57W-05 | Water clear | Red Yellow | - | - | - | AlGaInP | - | 624 605 | - | 14 14 | 37 38 | 130 |



Technical Specifications

| Absolute Maximum Ratings (Ta=25°C) Red, Yellow, Green, Orange | | | | Absolute Maximum Ratings (Ta=25°C) Blue/White | | | |
|--|----------------|-------------------|------|--|----------------|-------------------|------|
| Parameter | Symbol | Rating | Unit | Parameter | Symbol | Rating | Unit |
| Reverse Voltage | V _R | 5 | V | Reverse Voltage | V _R | 5 | V |
| Forward Current | I _F | 25 | mA | Forward Current | I _F | 25 | mA |
| Operating Temperature | Topr | -40 ~ +85 | °C | Operating Temperature | Topr | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +90 | °C | Storage Temperature | Tstg | -40 ~ +90 | °C |
| Soldering Temperature | Tsol | 260 for 5 seconds | °C | Soldering Temperature | Tsol | 260 for 5 seconds | °C |
| Electrostatic Discharge | ESD | 2000 | V | Electrostatic Discharge | ESD | 150 | V |
| Power Dissipation | Pd | 60 | mW | Power Dissipation | Pd | 110 | mW |
| Peak Forward Current (Duty 1/10 @ 1KHz) | I _F | 160 | mA | Peak Forward Current (Duty 1/10 @ 1KHz) | I _F | 100 | mA |

Electro-Optical Characteristics (Ta=25°C)

| ZUR55W-05 RED | | | | | | | ZUO55W-05 ORANGE | | | | | | |
|------------------------------|----------------|------|------|------|------|----------------------|------------------------------|----------------|------|------|------|------|----------------------|
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition | Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
| Luminous Intensity | I _v | ---- | 2 | ---- | mcd | I _F =2mA | Luminous Intensity | I _v | ---- | 2 | ---- | mcd | I _F =2mA |
| | | 14 | 37 | ---- | mcd | I _F =20mA | | | 11 | 30 | ---- | mcd | I _F =20mA |
| Viewing Angle | 2θ 1/2 | ---- | 140 | ---- | deg | I _F =20mA | Viewing Angle | 2θ 1/2 | ---- | 140 | ---- | deg | I _F =20mA |
| Peak Wavelength | λ _p | ---- | 632 | ---- | nm | I _F =20mA | Peak Wavelength | λ _p | ---- | 611 | ---- | nm | I _F =20mA |
| Dominant Wavelength | λ _d | ---- | 624 | ---- | nm | I _F =20mA | Dominant Wavelength | λ _d | ---- | 605 | ---- | nm | I _F =20mA |
| Spectrum Radiation Bandwidth | Δλ | ---- | 20 | ---- | nm | I _F =20mA | Spectrum Radiation Bandwidth | Δλ | ---- | 17 | ---- | nm | I _F =20mA |
| Forward Voltage | V _F | ---- | 2.0 | 2.4 | V | I _F =20mA | Forward Voltage | V _F | ---- | 2.0 | 2.4 | V | I _F =20mA |
| Reverse Current | I _R | ---- | ---- | 10 | μA | V _R =5V | Reverse Current | I _R | ---- | ---- | 10 | μA | V _R =5V |

| ZUB55W-05 BLUE | | | | | | | ZPW55D-05 WHITE | | | | | | |
|------------------------------|----------------|------|------|------|------|----------------------|------------------------------|----------------|------|------|-------|------|---------------------|
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition | Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
| Luminous Intensity | I _v | 2.6 | 7 | ---- | mcd | I _F =20mA | Luminous Intensity | I _v | 45.0 | ---- | 112.0 | mcd | I _F =5mA |
| Viewing Angle | 2θ 1/2 | ---- | 140 | ---- | deg | I _F =20mA | Viewing Angle | 2θ 1/2 | ---- | 140 | ---- | deg | I _F =5mA |
| Peak Wavelength | λ _p | ---- | 468 | ---- | nm | I _F =20mA | Peak Wavelength | λ _p | ---- | ---- | ---- | ---- | ---- |
| Dominant Wavelength | λ _d | ---- | 470 | ---- | nm | I _F =20mA | Dominant Wavelength | λ _d | ---- | ---- | ---- | ---- | ---- |
| Spectrum Radiation Bandwidth | Δλ | ---- | 25 | ---- | nm | I _F =20mA | Spectrum Radiation Bandwidth | Δλ | ---- | ---- | ---- | ---- | ---- |
| Forward Voltage | V _F | ---- | 3.5 | 4.3 | V | I _F =20mA | Forward Voltage | V _F | 2.70 | ---- | 3.15 | V | I _F =5mA |
| Reverse Current | I _R | ---- | ---- | 50 | μA | V _R =5V | Reverse Current | I _R | ---- | ---- | 50 | μA | V _R =5V |

| ZUY55W-05 YELLOW | | | | | | | ZMG55W-05 GREEN | | | | | | |
|------------------------------|----------------|------|------|------|------|----------------------|------------------------------|----------------|------|------|------|------|----------------------|
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition | Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
| Luminous Intensity | I _v | ---- | 2 | ---- | mcd | I _F =2mA | Luminous Intensity | I _v | ---- | 1 | ---- | mcd | I _F =2mA |
| | | 14 | 38 | ---- | mcd | I _F =20mA | | | 9 | 14 | ---- | mcd | I _F =20mA |
| Viewing Angle | 2θ 1/2 | ---- | 140 | ---- | deg | I _F =20mA | Viewing Angle | 2θ 1/2 | ---- | 140 | ---- | deg | I _F =20mA |
| Peak Wavelength | λ _p | ---- | 591 | ---- | nm | I _F =20mA | Peak Wavelength | λ _p | ---- | 575 | ---- | nm | I _F =20mA |
| Dominant Wavelength | λ _d | ---- | 589 | ---- | nm | I _F =20mA | Dominant Wavelength | λ _d | ---- | 573 | ---- | nm | I _F =20mA |
| Spectrum Radiation Bandwidth | Δλ | ---- | 15 | ---- | nm | I _F =20mA | Spectrum Radiation Bandwidth | Δλ | ---- | 20 | ---- | nm | I _F =20mA |
| Forward Voltage | V _F | ---- | 2.0 | 2.4 | V | I _F =20mA | Forward Voltage | V _F | ---- | 2.0 | 2.4 | V | I _F =20mA |
| Reverse Current | I _R | ---- | ---- | 10 | μA | V _R =5V | Reverse Current | I _R | ---- | ---- | 10 | μA | V _R =5V |



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