| QTB | | | |
|--|--|---------------------|------------|
| | PRODUCT CHANGE NOTIFICATION | DN_ | |
| PCN No.: | 10087 | Date of Issue: | 2021/03/26 |
| Title of Change: | Chip Efficiency & Brightness Improvement | PCN Effective Date: | 2021/03/26 |
| Change Description: | QTB datasheet is updated due to increased LED brightness on the red color. | | 1 |
| Reason for Change: | Due to the chip performance and efficiency improved over the year, LED light output is increased. | | |
| Date Code Identification | QBLP679-RGB & QBLP679E-RGB shipped AFTER 03/05/2021 (Date Code: 210305) will have new brightness binnning | | |
| Effect of Change on Product Fit, Form, or Function | Fit: Remains Unchanged, Form: Remains Unchanged, Funchion: Unchanged | | |
| | Reference To Change Types: | | |
| | ■ Acquisition (Complete) ■ Acquisition (Partial) ■ Fabrication Site Change / Qualification / Country of Origin / New Subcontractor | | |
| | ■ Obsolescence ■ Cosmetic Change ■ Name Change | | |
| | ■ Nomenclature Change ■ Reversal ■ Process Change | | |
| | ■ Design Change / Data Sheet Spec Change ■ Packaging and Media ■ Storage and Handling | | |
| | ■ Logistics ■ Roadmap | | |
| | ■ Quality Alert Notifications ■ Multiple Types | | |
| | ■ Environmental Announcement | | |
| | ■ New Component or Raw Material Added ■ Other | | |
| | | 10/10/2010 | Revision |

| | AFFECTED PARTS NUMBERS | | | | | | | |
|--------------|----------------------------|----------------------------------|--|--|--|--|--|--|
| | | | | | | | | |
| MPN | Part Name | Replacement Part Number (if any) | | | | | | |
| QBLP679E-RGB | LED RGB DIFFUSED 6PLCC SMD | | | | | | | |
| QBLP679-RGB | LED RGB DIFFUSED 6PLCC SMD | | | | | | | |
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P/N Old Version # New Version #

Ola

Electrical / Optical Characteristic (Ta=25 °C)

| Liectrical / Optical Characteristic (1a-25 C) | | | | | | | | | |
|---|---------------------------|---------------------|--------------------|------|---------------------|------|------|----------------------|------|
| Product | Color I _E (mA) | | V _F (V) | | λ _D (nm) | | | I _V (mcd) | |
| Floudet | Color | I _F (mA) | Тур. | Max. | Min. | Тур. | Max. | Min | Tvp. |
| | Red | 20 | 2.0 | 2.5 | 615 | 620 | 630 | 400 | 630 |
| QBLP679E-RGB | True Green | 20 | 3.3 | 3.7 | 520 | 525 | 530 | 1000 | 1500 |
| | Blue | 20 | 3.2 | 3.7 | 465 | 470 | 475 | 200 | 285 |

Absolute Maximum Rating

| Abbolate maximum rating | | | | | | | | |
|-------------------------|---------------------|---------------------|-----------------------|--------------------|----------------------|----------------------|-------------------------|--------------|
| Material | P _d (mW) | I _F (mA) | I _{FP} (mA)* | V _R (V) | T _{OP} (°C) | T _{ST} (°C) | T _{SOL} (°C)** | ESD (V) |
| InGaN (IB/IG) | 111 | 30 | 125 | 5 | -40 to +80 | -40 to +85 | 260 | HBM 12000 |
| AllnGaP (R) | 75 | 30 | 125 | 5 | -40 to +80 | -40 to +85 | 260 | HBM 8000 |

^{*}Duty 1/8 @ 1KHz **IR Reflow for no more than 10 sec @ 260 °C

Luminous Intensity by for Red @ I-=20mA

| Luminous intensity ly for Red (a) I _F =20mA | | | | | | | | | |
|--|------|------|------|--|--|--|--|--|--|
| Bin | Min. | Max. | Unit | | | | | | |
| P | 400 | 500 | | | | | | | |
| Q | 500 | 630 | mcd | | | | | | |
| R | 630 | 800 | mca | | | | | | |
| S | 800 | 1000 | | | | | | | |

New

Electrical / Optical Characteristic (Ta=25 °C)

| Electrical / Optical Characteristic (14 20 0) | | | | | | | | | |
|---|------------|---|------|------|------|---------------------|------|----------------------|------|
| Product Color | | Color I _F (mA) V _F (V | | (V) | | λ _D (nm) | | I _v (mcd) | |
| Product | Color | IF (IIIA) | Typ. | Max. | Min. | Typ. | Max. | Min | Typ. |
| | Red | 20 | 2.0 | 2.5 | 615 | 620 | 630 | 500 | 840 |
| QBLP679-RGB | True Green | 20 | 3.3 | 3.7 | 520 | 525 | 530 | 1000 | 1500 |
| | Blue | 20 | 3.2 | 3.7 | 465 | 470 | 475 | 200 | 285 |

Absolute Maximum Rating

| Material | P _d (mW) | I _F (mA) | I _{FP} (mA)* | V _R (V) | T _{OP} (°C) | T _{ST} (°C) | T _{SOL} (°C)** | ESD (V) |
|---------------|---------------------|---------------------|-----------------------|--------------------|----------------------|----------------------|-------------------------|-------------|
| InGaN (IB/IG) | 111 | 30 | 125 | 5 | -40 to +80 | -40 to +85 | 260 | HBM 2000 |
| AllnGaP (R) | 75 | 30 | 125 | 5 | -40 to +80 | -40 to +85 | 260 | HBM 8000 |

^{*}Duty 1/8 @ 1KHz **IR Reflow for no more than 10 sec @ 260 °C

Luminous Intensity I_V for Red @ I_E=20mA

| Editinous intensity is for ited to it - zoniA | | | | | | | | |
|---|------|------|------|--|--|--|--|--|
| Bin | Min. | Max. | Unit | | | | | |
| Q | 500 | 630 | | | | | | |
| R | 630 | 800 | | | | | | |
| S | 800 | 1000 | mcd | | | | | |
| Т | 1000 | 1250 | | | | | | |
| U | 1250 | 1600 | | | | | | |