

## SMD Chip LEDs

| Shape       | Part Number | Emitting Color | Emitting Material | Lens-Color      | Wave Length (nm) | Luminous Intensity 20mA(mcd) |       | Viewing Angle | Figure No. |
|-------------|-------------|----------------|-------------------|-----------------|------------------|------------------------------|-------|---------------|------------|
|             |             |                |                   |                 |                  | Min.                         | Typ.. |               |            |
| 1.6mmX0.8mm | ZHR53D      | Red            | GaP               | Red Diffused    | 700              | 0.8                          | 1.2   | 120°          | 1          |
|             | ZHR53C      | Red            | GaP               | Red Trans.      | 700              | 0.8                          | 1.2   | 120°          |            |
|             | ZHR53W      | Red            | GaP               | Water Clear     | 700              | 0.8                          | 1.2   | 120°          |            |
|             | ZUR53D      | Red            | GaAsP/GaP         | Red Diffused    | 625              | 5                            | 12.5  | 120°          |            |
|             | ZUR53C      | Red            | GaAsP/GaP         | Red Trans.      | 625              | 5                            | 12.5  | 120°          |            |
|             | ZUR53W      | Red            | GaAsP/GaP         | Water Clear     | 625              | 5                            | 12.5  | 120°          |            |
|             | ZMR53D      | Red            | GaAlAs            | Red Diffused    | 660              | 40                           | 70    | 120°          |            |
|             | ZMR53C      | Red            | GaAlAs            | Red Trans.      | 660              | 40                           | 70    | 120°          |            |
|             | ZMR53W      | Red            | GaAlAs            | Water Clear     | 660              | 40                           | 70    | 120°          |            |
|             | ZMG53D      | Green          | GaP               | Green Diffused  | 565              | 3.2                          | 12.5  | 120°          |            |
|             | ZMG53C      | Green          | GaP               | Green Trans.    | 565              | 3.2                          | 12.5  | 120°          |            |
|             | ZMG53W      | Green          | GaP               | Water Clear     | 565              | 3.2                          | 12.5  | 120°          |            |
| 2.0mmX1.2mm | ZHR54D      | Red            | GaP               | Red Diffused    | 700              | 0.8                          | 1.2   | 120°          | 2          |
|             | ZHR54C      | Red            | GaP               | Red Trans.      | 700              | 0.8                          | 1.2   | 120°          |            |
|             | ZHR54W      | Red            | GaP               | Water Clear     | 700              | 0.8                          | 1.2   | 120°          |            |
|             | ZUR54D      | Red            | GaAsP/GaP         | Red Diffused    | 625              | 5                            | 12.5  | 120°          |            |
|             | ZUR54C      | Red            | GaAsP/GaP         | Red Trans.      | 625              | 5                            | 12.5  | 120°          |            |
|             | ZUR54W      | Red            | GaAsP/GaP         | Water Clear     | 625              | 5                            | 12.5  | 120°          |            |
|             | ZMR54D      | Red            | GaAlAs            | Red Diffused    | 660              | 40                           | 70    | 120°          |            |
|             | ZMR54C      | Red            | GaAlAs            | Red Trans.      | 660              | 40                           | 70    | 120°          |            |
|             | ZMR54W      | Red            | GaAlAs            | Water Clear     | 660              | 40                           | 70    | 120°          |            |
|             | ZMG54D      | Green          | GaP               | Green Diffused  | 565              | 3.2                          | 12.5  | 120°          |            |
|             | ZMG54C      | Green          | GaP               | Green Trans.    | 565              | 3.2                          | 12.5  | 120°          |            |
|             | ZMG54W      | Green          | GaP               | Water Clear     | 565              | 3.2                          | 12.5  | 120°          |            |
| 3.2mmX1.6mm | ZHR55D      | Red            | GaP               | Red Diffused    | 700              | 0.8                          | 1.2   | 120°          | 3          |
|             | ZHR55C      | Red            | GaP               | Red Trans.      | 700              | 0.8                          | 1.2   | 120°          |            |
|             | ZHR55W      | Red            | GaP               | Water Clear     | 700              | 0.8                          | 1.2   | 120°          |            |
|             | ZUR55D      | Red            | GaAsP/GaP         | Red Diffused    | 625              | 5                            | 12.5  | 120°          |            |
|             | ZUR55C      | Red            | GaAsP/GaP         | Red Trans.      | 625              | 5                            | 12.5  | 120°          |            |
|             | ZUR55W      | Red            | GaAsP/GaP         | Water Clear     | 625              | 5                            | 12.5  | 120°          |            |
|             | ZMR55D      | Red            | GaAlAs            | Red Diffused    | 660              | 40                           | 70    | 120°          |            |
|             | ZMR55C      | Red            | GaAlAs            | Red Trans.      | 660              | 40                           | 70    | 120°          |            |
|             | ZMR55W      | Red            | GaAlAs            | Water Clear     | 660              | 40                           | 70    | 120°          |            |
|             | ZMG55D      | Green          | GaP               | Green Diffused  | 565              | 3.2                          | 12.5  | 120°          |            |
|             | ZMG55C      | Green          | GaP               | Green Trans.    | 565              | 3.2                          | 12.5  | 120°          |            |
|             | ZMG55W      | Green          | GaP               | Water Clear     | 565              | 3.2                          | 12.5  | 120°          |            |
| 1           | ZUY53D      | Yellow         | GaAsP/GaP         | Yellow Diffused | 590              | 3.2                          | 8     | 120°          |            |
|             | ZUY53C      | Yellow         | GaAsP/GaP         | Yellow Trans.   | 590              | 3.2                          | 8     | 120°          |            |
|             | ZUY53W      | Yellow         | GaAsP/GaP         | Water Clear     | 590              | 3.2                          | 8     | 120°          |            |
|             |             |                |                   |                 |                  |                              |       |               |            |
| 2           | ZUY54D      | Yellow         | GaAsP/GaP         | Yellow Diffused | 590              | 3.2                          | 8     | 120°          |            |
|             | ZUY54C      | Yellow         | GaAsP/GaP         | Yellow Trans.   | 590              | 3.2                          | 8     | 120°          |            |
|             | ZUY54W      | Yellow         | GaAsP/GaP         | Water Clear     | 590              | 3.2                          | 8     | 120°          |            |
|             |             |                |                   |                 |                  |                              |       |               |            |
| 3           | ZUY55D      | Yellow         | GaAsP/GaP         | Yellow Diffused | 590              | 3.2                          | 8     | 120°          |            |
|             | ZUY55C      | Yellow         | GaAsP/GaP         | Yellow Trans.   | 590              | 3.2                          | 8     | 120°          |            |
|             | ZUY55W      | Yellow         | GaAsP/GaP         | Water Clear     | 590              | 3.2                          | 8     | 120°          |            |
|             |             |                |                   |                 |                  |                              |       |               |            |

