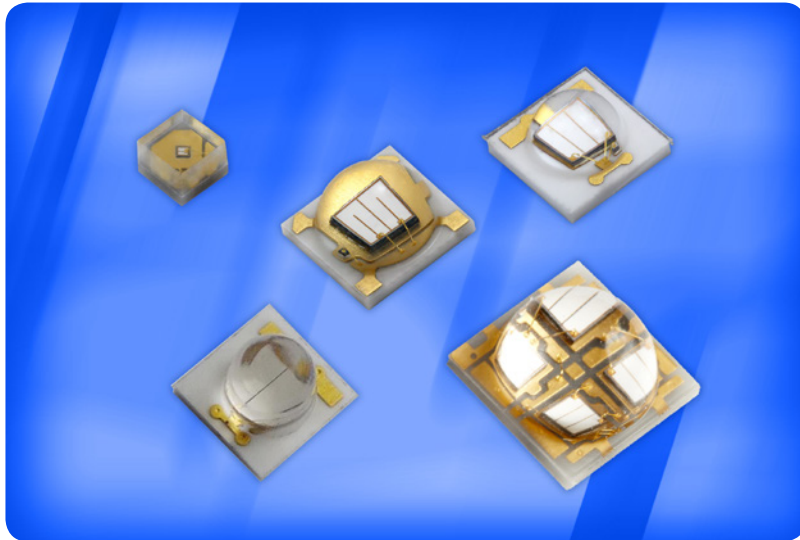


## Ceramic-Based UV LEDs



Vishay introduces a family of ceramic-based, high-power UV LEDs with silicone lenses that deliver exceptionally long lifetime for reliable, energy-saving replacement for mercury lamps.

### PRODUCT BENEFITS

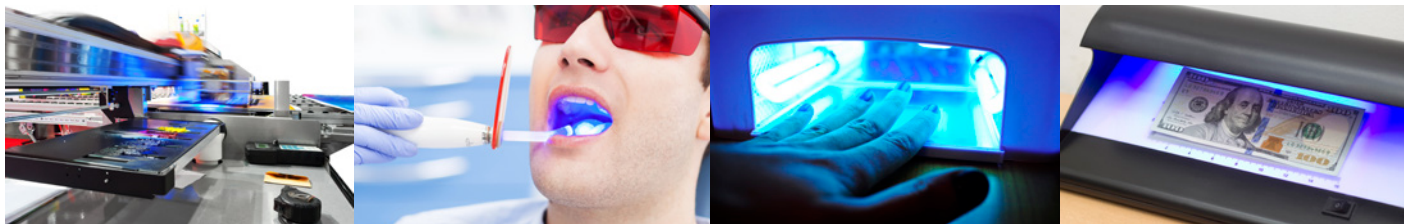
- Exceptionally long lifetime
- Compact surface-mount packages
- RoHS-compliant, halogen-free, and Vishay Green
- Compatible with reflow soldering processes
- Moisture Sensitivity Level of 3 in accordance with J-STD-020

### APPLICATIONS

- UV curing
  - Nail salon
  - Dental
  - Printing
- Blood detection
- Counterfeit currency detection
- Photocatalytic purification

### RESOURCES

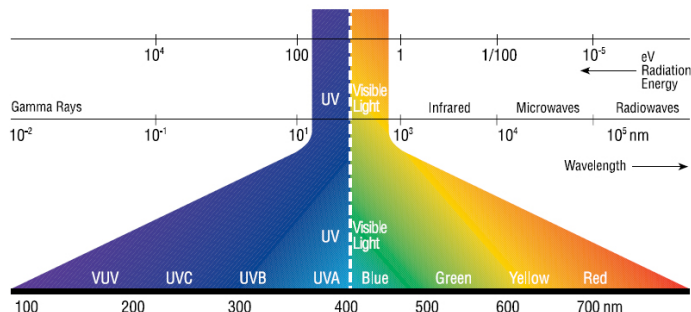
- UV LED portfolio: [www.vishay.com/leds/ultraviolet/](http://www.vishay.com/leds/ultraviolet/)
- Full LED portfolio: [www.vishay.com/leds](http://www.vishay.com/leds)
- For technical questions: [LED@Vishay.com](mailto:LED@Vishay.com)
- Sales contacts: [www.vishay.com/doc?99914](http://www.vishay.com/doc?99914)
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



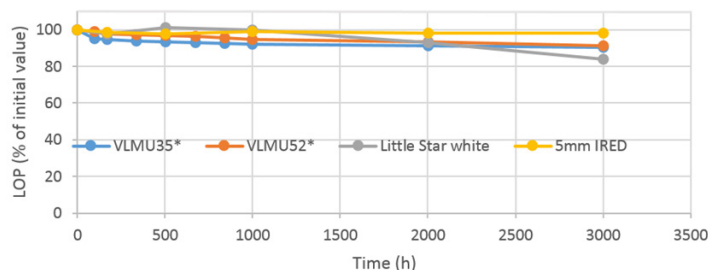
### TECHNOLOGY COMPARISON

|               | UV LED                            | MERCURY LAMP             |
|---------------|-----------------------------------|--------------------------|
| Life cycle    | 25 k Hours                        | 10 k Hours               |
| Environmental | No heavy metals                   | Unfriendly               |
| Security      | Low-voltage, simple drive circuit | Shock sensitive          |
| Energy        | Low power consumption             | Higher power consumption |

THE ELECTROMAGNETIC SPECTRUM



LIFETIME AT MAXIMUM JUNCTION TEMPERATURE



### PRODUCT TABLE

| PART NUMBER                      | PACKAGE                | WAVELENGTH OR COLOR COORDINATE (X, Y) |      |      | RADIANT POWER (MW) |      |      | AT IF (mA) | FORWARD VOLTAGE, V <sub>F</sub> (V) |      | ANGLE OF HALF INTENSITY (±°) | KEY FEATURE |
|----------------------------------|------------------------|---------------------------------------|------|------|--------------------|------|------|------------|-------------------------------------|------|------------------------------|-------------|
|                                  |                        | MIN.                                  | TYP. | MAX. | MIN.               | TYP. | MAX. |            | TYP.                                | MAX. |                              |             |
| <a href="#">VLMU1610-365-150</a> | SMD ceramic mid power  | 362.5                                 | 367  | 370  | 12                 | 18   | 22   | 20         | 3.5                                 | 4    | 67.5                         | Mid Power   |
| <a href="#">VLMU3100</a>         | SMD PLCC-2             | 400                                   | 405  | 410  |                    | 6.8  |      | 20         | 3.2                                 | 3.8  | 60                           | Standard    |
| <a href="#">VLMU3500-385-060</a> | SMD ceramic high power | 380                                   | 385  | 390  | 620                | 780  | 940  | 500        | 3.4                                 | 4    | 30                           | Power       |
| <a href="#">VLMU3500-395-060</a> |                        | 390                                   | 395  | 400  |                    |      |      |            |                                     |      |                              |             |
| <a href="#">VLMU3500-405-060</a> |                        | 400                                   | 405  | 410  |                    |      |      |            |                                     |      |                              |             |
| <a href="#">VLMU3500-385-120</a> | SMD ceramic high power | 380                                   | 385  | 390  | 620                | 780  | 940  | 500        | 3.4                                 | 4    | 60                           | Power       |
| <a href="#">VLMU3500-395-120</a> |                        | 390                                   | 395  | 400  |                    |      |      |            |                                     |      |                              |             |
| <a href="#">VLMU3500-405-120</a> |                        | 400                                   | 405  | 410  |                    |      |      |            |                                     |      |                              |             |
| <a href="#">VLMU3510-365-130</a> | SMD ceramic high power | 362.5                                 | 367  | 370  | 560                | 690  | 835  | 500        | 4                                   | 4.4  | 65                           | Power       |
| <a href="#">VLMU5200-385-140</a> | SMD ceramic high power | 380                                   | 385  | 390  | 1800               | 2500 | 3300 | 500        | 14.5                                | 16   | 70                           | Power       |
| <a href="#">VLMU5200-395-140</a> |                        | 390                                   | 395  | 400  |                    |      |      |            |                                     |      |                              |             |
| <a href="#">VLMU5200-405-140</a> |                        | 400                                   | 405  | 410  |                    |      |      |            |                                     |      |                              |             |