

# LED CHIP

*UV/VIS/IR LEDs Solution Provider*

USHIO is a high quality solutions provider in the field of industrial LED's and photo sensors. As a solutions provider, USHIO offers all wavelengths from UVC to visible and even into the infrared spectrum with available wavelengths between 270 and 1550nm.

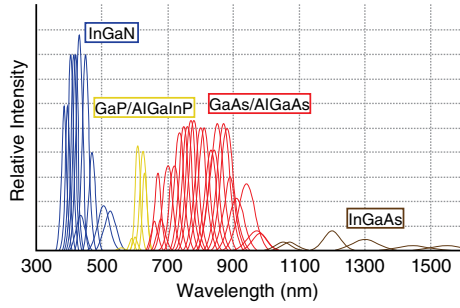
An extensive range of package styles are also available including SMD, high power TOP, super beam, ultra high power arrays, stem, SMBB and photodiodes and phototransistors. With this wide array of available LED wavelengths and package styles, USHIO products are able to meet the needs of many market segments. These markets include automotive ITS, visual imaging, UV curing, lithographic exposure, bio-medical applications, night vision, sorting and material curing. Speed, agility and flexibility define USHIO's LED solutions.

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**CUSTOM LED DEVICES**

- Medical
- 3-D Curing
- Print Curing
- Lithography
- Water Purification
- Skin Treatment
- Material Curing
- Biometric Finger
- Solar Simulation



Simulated spectral radiation power traces indicate the typical spectral performance of each part number. This is not an actual measurement data.

■ Choose from Over 40 Emission Spectra Types

365	395	435	545	645	700	760	870	1050
	405	450	570	660	720	780	890	1070
278	375	415	470	590	670	735	810	910
	420	505	620	680	740	830	940	1450
385	430	525	630	690	750	850	970	1550

Ultraviolet Light

Visible Light

Near-Infrared Light

nm

■ Package Lineup



LED Plastic Mold



Surface Mount Package



High Power SMB



High Power Illuminator



Stem Type LED



Super Beam Type LED



SMB with Outer Lens



For Horticulture Lighting

## CUSTOM LED DEVICES

### IR Illumination:

IR LED arrays are available between 780 and 1550nm. Their customizable sizes and wavelengths allow for IR security monitoring as well as specific material and area heating and curing. Other custom wavelengths are available upon request.

### Multi Wavelength:

With a multi wavelength, the user is given the option to use a combination of a variety of available wavelengths in a single package. These combination wavelengths are available between 270 and 1550nm and can also combine UV and IR wavelengths. Standard multi wavelength packages available.

### High Density Array:

In a high density array, up to 60 chips can be used in less than an 8mm square array. These arrays are available for most wavelengths between 270 and 1550nm..

### High Power Array:

High power output arrays feature uniform light emission using water cooling systems. These UV wavelengths are available between 365 and 405nm. Other custom wavelengths are available upon request.



IR Illumination



Multi Wavelength



High Density Array



High Power Array