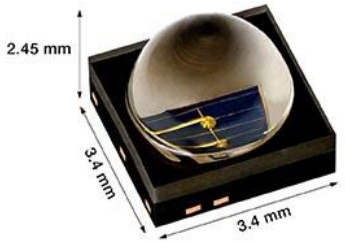
New AEC-Q102 Qualified IR Emitters Deliver 10 % Higher Radiant Intensity in 20 % Smaller Footprint; 850 nm and 940 nm Devices Offer High Drive Currents to 1.5 A DC and 5 A Pulsed, Radiant Intensity to 6000 mW/sr in 3.4 mm by 3.4 mm SMD Packages

Product Benefits:

- AEC-Q102 qualified
- Compact 3.4 mm by 3.4 mm surface-mount packages
- Centroid wavelengths of 850 nm and 940 nm
- Feature a double-stack chip for high typical radiant intensity up to 6000 mW/sr at a 5 A pulse current and 2000 mW/sr at a 1.5 A DC current
- Available in four angles of half intensity — ± 28°, ± 40 °, ± 60°, and ± 75° — to accommodate varying fields of view across different applications
- Operate over a temperature range from -40 °C to +125 °C
- Low thermal resistance from 5 K/W to 9 K/W
- RoHS-compliant, halogen-free, and Vishay Green
- Support lead (Pb)-free reflow soldering
- High ESD immunity up to 5 kV in accordance with ANSI / ESDA / JEDEC® JS-001
- Floor life of 168 hours
- Moisture sensitivity level of 3 in accordance with J-STD-020E



Market Applications:

- ADAS, driver and cabin monitoring systems, and eye tracking, as well as CCTV

The News:

Vishay Intertechnology broadens its optoelectronics portfolio with the release of eight new AEC-Q102 qualified 850 nm and 940 nm high power infrared (IR) emitters that deliver best in class radiant intensity in 3.4 mm by 3.4 mm surface-mount packages. Built on Vishay's Astral surface emitter chip technology, the Vishay Semiconductors devices are designed for high drive currents up to 1.5 A DC and 5 A pulsed in automotive applications.

- The IR emitters provide 10 % higher radiant intensity than the closest competing device. These values increase illumination for better contrast, while minimizing the number of components required — lowering costs and saving space
- For further space savings, the devices' compact surface-mount packages with lenses occupy a 20 % smaller footprint than competing devices
- The 940 nm devices are designed to suppress the red glow effect, while the 850 nm emitters provide a better match with cameras

- The emitters' low thermal resistance provides optimized thermal management and enables their high drive currents

The Key Specifications:

Part Number	Dimensions (L x W x H) mm	Centroid wavelength (nm)	Typ. radiant intensity (mW/SR) at		Angle of half intensity (±°)	Rise time (ns)
			I_F = 1.5 A	I_F = 5 A		
VSMA1094750X02	3.4 x 3.4 x 1.5	940	535	1600	75	10
VSMA1094600X02	3.4 x 3.4 x 1.8	940	750	2300	60	10
VSMA1094400X02	3.4 x 3.4 x 2.45	940	1525	4620	40	10
VSMA1094250X02	3.4 x 3.4 x 2.9	940	2000	6000	28	10
VSMA1085750X02	3.4 x 3.4 x 1.5	850	535	1600	75	13
VSMA1085600X02	3.4 x 3.4 x 1.8	850	750	2300	60	13
VSMA1085400X02	3.4 x 3.4 x 2.45	850	1525	4620	40	13
VSMA1085250X02	3.4 x 3.4 x 2.9	850	2000	6000	28	13

Availability:
Samples and production quantities of the new IR emitters are available now, with lead times of 8 to 12 weeks.

To access the product datasheets on the Vishay Website, go to
http://www.vishay.com/ppg?80365 (VSMA1094750X02)
http://www.vishay.com/ppg?80268 (VSMA1094600X02)
http://www.vishay.com/ppg?80227 (VSMA1094400X02)
http://www.vishay.com/ppg?80179 (VSMA1094250X02)
http://www.vishay.com/ppg?80374 (VSMA1085750X02)
http://www.vishay.com/ppg?80262 (VSMA1085600X02)
http://www.vishay.com/ppg?80245 (VSMA1085400X02)
http://www.vishay.com/ppg?80242 (VSMA1085250X02)

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