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3.5 times more radiant intensity with an integrated lens

Infrared Dragon with integrated lens from OSRAM Opto Semiconductors

With an integrated lens, the new IR LED SFH 4236 exceeds the radiant intensity of the standard IR Dragon SFH 4232 by more than a factor of three. This new, powerful device has a very small form factor and adds depth to the well-known infrared Dragon family. The integrated lens concentrates the emitted infrared light within a viewing angle of +/-20° and achieves a typical radiant intensity of 650 mW/sr at a DC current of 1 A. The new infrared Dragon is well suited for applications with limited board space that require narrow radiation characteristics.

Up until now, a narrow beam angle was only possible with the use of external lenses. The SFH 4236 provides higher radiant intensity, and with its integrated lens, does not require a complex, expensive external lens assembly. "Designed with automotive applications in mind, the total height of the new SFH 4236 is about 35% smaller compared to conventional Dragon solutions with an external lens", said Harry Feltges, Marketing Manager Infrared Devices at OSRAM Opto Semiconductors. The footprint is identical to the other IR Dragon devices, and the SFH 4236 can be used as a drop-in replacement in existing designs. It shows the same electrical parameters as the standard IR Dragon and is suitable for reflow soldering.

The IR LED emits at a wavelength of 850 nm and is the best compromise between maximum spectral sensitivity for CCD and CMOS cameras and suppressed visibility for the human eye. Ideal applications for this new device are camera-based vision systems for the industrial and security sector, as well as various applications in the automotive sector. Examples of automotive applications include driver and passenger monitoring systems for cars and trucks and blind spot detection systems.

The 850 nm IR Dragon family consists of the standard version SFH4232, the stack version SFH4235 with twice the total radiant flux and the new SFH4236 with integrated lens.



Image: OSRAM

<http://www.osram-os.com/press>

Additional safety features in the car: drowsy driver monitoring systems benefit from the high radiant intensity and small dimensions of the SFH 4236.

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