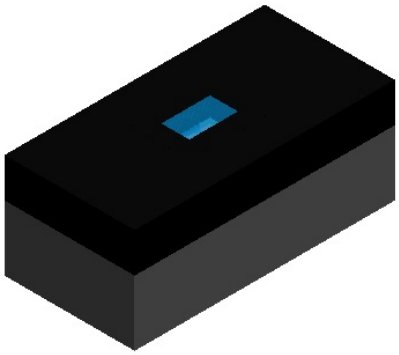
LA PL110RBD

140° Royal Blue Point Source LED (470 nm)

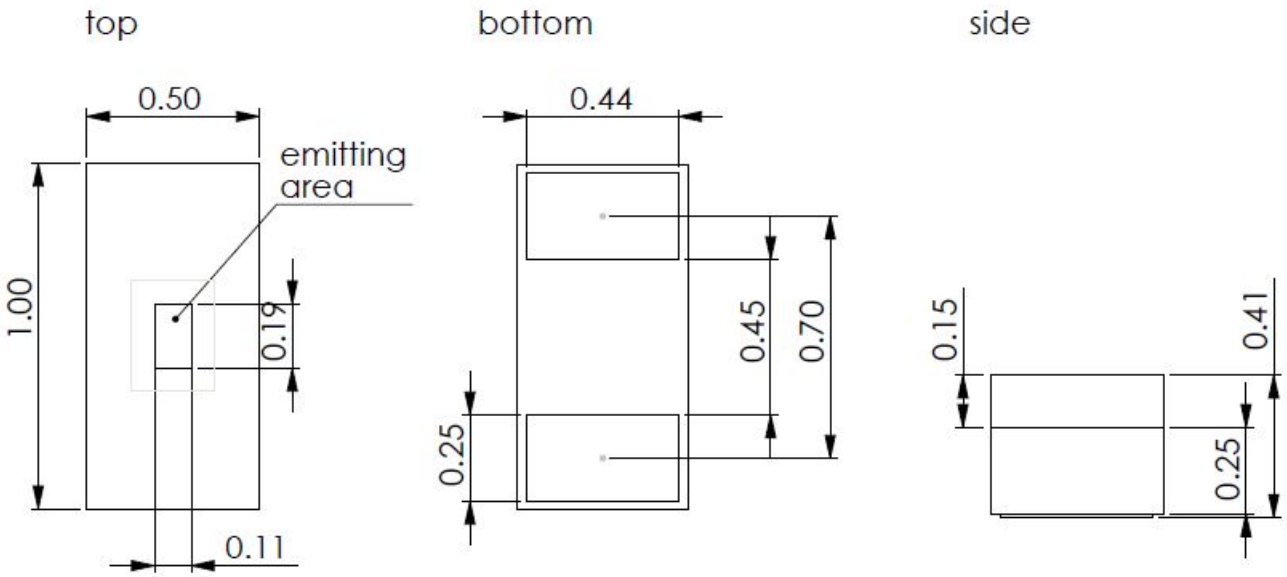
The point source 0402 LED is designed for applications, where an extremely small emission point without any bondwires is needed. The LED is produced by using a high efficiency LED flip chip mounted on a small black ceramic aluminum oxide submount, filled to the emitting surface with black silicone.The point source LED is easy to handle and IR-reflow solderable.The chip placement accuracy relative to the package is very high.

Features

- Optical power 4 mW
- Peak wavelength 470 nm
- High optical efficiency
- Point source chip
- Emitting area 110x190μm^2
- Black SMT package



Dimensions



Ordering information

ORDERING NUMBER	ORDERING DESCRIPTION
LA PL110RBD-1018-X	LED Component, 1005 SMD ceramic , 450 - 480 nm, 2 - 12 mW, 140° Viewing Angle

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LIGHT AVENUE
A Brand of Chips 4 Light GmbH

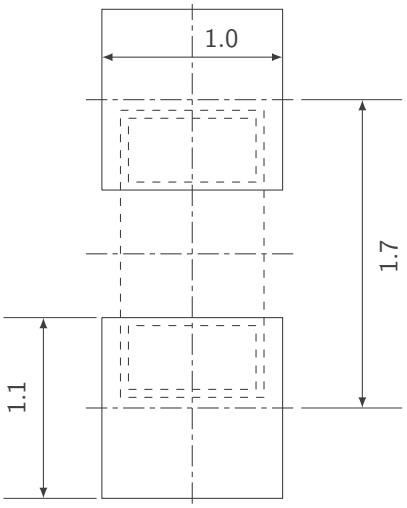
Electro-optical characteristics ($T_A = 25°C$)[2]

PARAMETER	SYMBOL	CONDITION	MIN.	TYP.[1]	MAX.	UNIT
Radiant power	Φ_e	$I_f = 20\,mA$	2	4	12	mW
Radiant intensity	I_e	$I_f = 20\,mA$		1		mW/sr
Forward voltage	V_F	$I_f = 20\,mA$	2.6	3.1	3.6	V
Peak wavelength	λ_{peak}	$I_f = 20\,mA$	450	470	480	nm
Spectral width	RMS	$I_f = 20\,mA$		21		nm
Beam Divergence Angle	θ	$I_f = 20\,mA$		140		°

Maximum ratings ($T_A = 25°C$)

PARAMETER	SYMBOL	CONDITION	MINIMUM	MAXIMUM	UNIT
Operating Current	$I_{f,max}$			50	mA
Operating Pulse Current	$I_{fp,max}$	$t_p = 10\mu s$, D = 2%		200	mA
Operating Temperature	T_{op}		-40	100	° C
Storage Temperature	T_{st}		-40	100	° C
Junction Temperature	T_j			125	° C
Reverse Voltage	V_R		5		V
Power Consumption	P_{tot}			180	mW

Recommended Solderpad



Soldering

The device is suitable for standard reflow soldering according to JEDEC J-STD-020. Peak temperature between 245 and 260°C.

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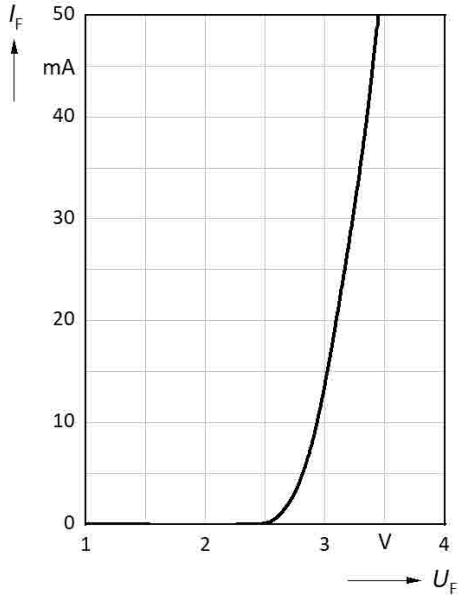
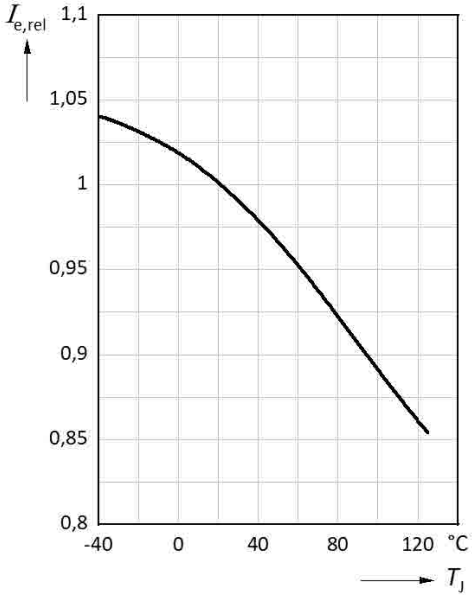
Typical characteristics graphs

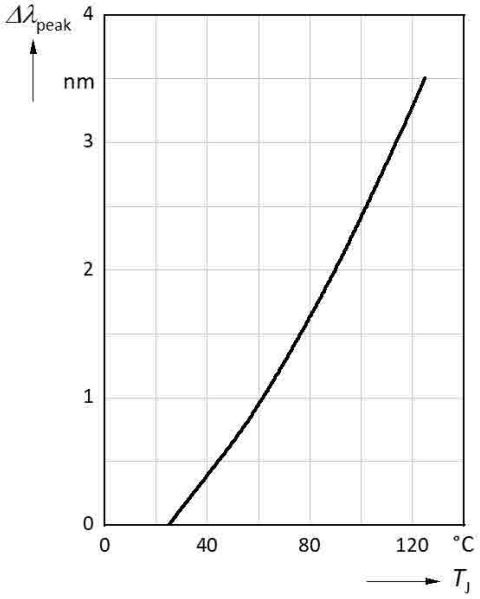
Forward Current vs. Forward Voltage



Relative Radiant Intensity vs. Junction Temperature



Peak Wavelength Shift vs. Junction Temperature



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Important Usage and Application Information

Lead free product - RoHS compliant.
All products, product specifications and data to improve reliability, function, design or otherwise are subject to change without notice. The information describes the type of component and shall not be considered as assured characteristics.
Due to technical requirements components may contain dangerous substances. For information on the types in question please contact our Sales Organization.
The light output of the products may cause injuries to human eyes in circumstances where the products are viewed directly with unshielded eyes. LEDs can emit highly concentrated light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 60825-1 and IEC 62471.

Handling and Storage Conditions

This product is sensitive to electrostatic discharge (ESD).
Storage ambient conditions for all LEDs in sealed packages must be within $T_A = 10...40°C$ and relative humidity < 60%. LEDs in opened packages must be used within 2 weeks after opening. Storage time under the conditions above in sealed packages must not exceed 24 months.

Packing

LEDs are packaged automatically on reels and packed into paperboard containers. Labels for identification are placed on the box. The label shows company name and address, LED type, quantity and lot number. The box is hermetically sealed in a plastic bag for shipment.

Returns and Complaints

For complaints and returns of material a RMA-number is necessary. Samples for analysis purposes can be send to us without credit.

Shipping Conditions

If not otherwise arranged, the "General Terms of Business of Chips 4 Light GmbH" apply for any shipment. If this document is not familiar to you, please request it at our nearest sales office.

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[1]Due to the special conditions of the manufacturing processes of lasers, the typical data or calculated correlations of technical parameters can only reflect statistical figures. These do not necessarily correspond to the actual parameters of each single product, which could differ from the typical data and calculated correlations or the typical characteristic line. If requested, e.g. because of technical improvements, these typ. data will be changed without any further notice.
[2]Light Measurements are done with an accuracy of ±15%. Voltage and wavelength are measured with an accuracy of ± 0.1 V and ± 1 nm. Correlation to customer's equipment and products is required.
[3]A critical component is a component used in a life-support device or system whose failure can reasonably be expected to cause the failure of that life-support device or system, or to affect its safety or the effectiveness of that device or system.
[4]Life support devices or systems are intended(a) to be implanted in the human body,or(b) to support and/or maintain and sustain human life.If they fail, it is reasonable to assume that the health and the life of the user may be endangered..

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