OSRAM GW KANLB6.CM

Datasheet

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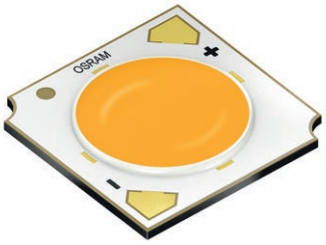
SOLERIQ® S 13

GW KANLB6.CM

The SOLERIQ® S products were specifically designed for applications requiring large flux packages out of a compact area.



Applications

- Indoor Lighting

Features

- Package: Chip-on-Board
- Typ. Radiation: 120° (Lambertian emitter)
- Color temperature: 3000K - 4000K
- CRI: 90 (min.)
- ESD: 2 kV acc. to ANSI/ESDA/JEDEC JS-001 (HBM, Class 2)
- Luminous Flux: typ. 2522 lm @ 3000 K, 85 °C
- Luminous efficacy: typ. 137 lm/W @ 3000 K, 85 °C

Ordering Information

Type	Color temperature	Luminous Flux [1] I_F = 540 mA Φ_V	Ordering Code
GW KANLB6.CM-SSTP-30S3	3000 K	2240 ... 3040 lm	Q65113A1477
GW KANLB6.CM-SSTP-40S3	4000 K	2240 ... 3040 lm	Q65113A1478

Maximum Ratings

Parameter	Symbol		Values
Operating Temperature	T_{op}	min. max.	-40 °C 105 °C
Storage Temperature	T_{stg}	min. max.	-40 °C 105 °C
Junction Temperature	T_j	max.	125 °C
Forward Current T_J = 85 °C	I_F	min. max.	60 mA 1380 mA
Reverse voltage [2)]	V_R		Not designed for reverse operation
ESD withstand voltage acc. to ANSI/ESDA/JEDEC JS-001 (HBM, Class 2)	V_{ESD}		2 kV

Characteristics

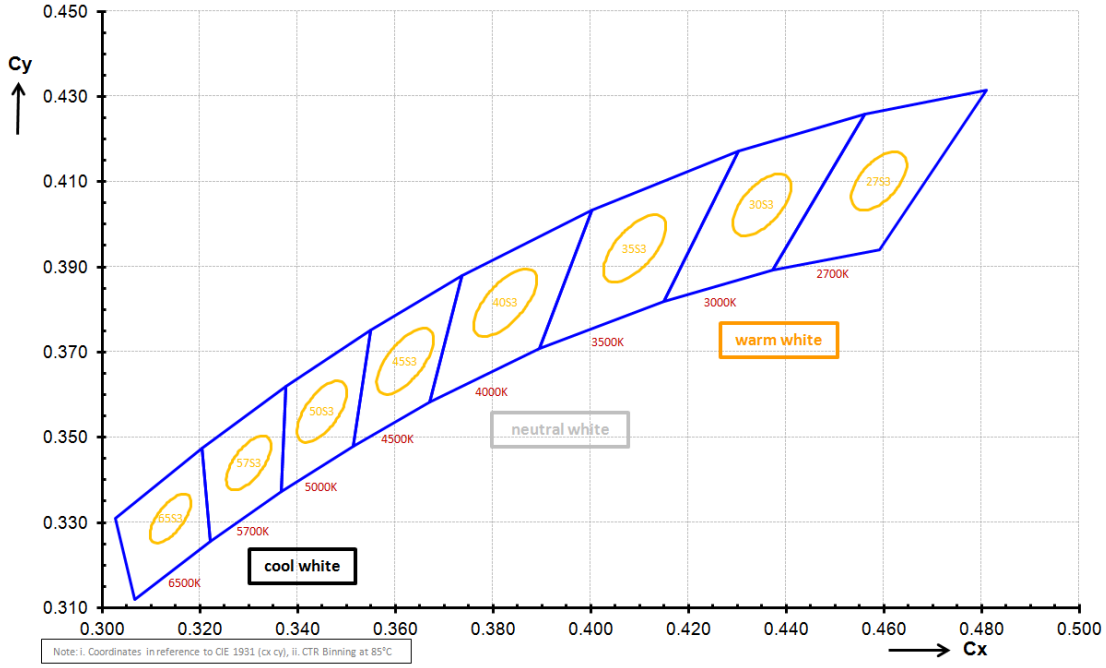
I_F = 540 mA; T_J = 85 °C

Parameter	Symbol		Values
Viewing angle at 50% I_V	2φ	typ.	120 °
Forward Voltage [3]	V_F	typ.	34.00 V
Reverse current [2]	I_R		Not designed for reverse operation
Color Rendering Index [4]	CRI	min.	90
Electrical thermal resistance junction/solderpoint with efficiency η_e = 47 %	$R_{thJS\ elec.}$	typ.	0.33 K / W

Brightness Groups

Group	Luminous Flux [1] I_F = 540 mA min. Φ_V	Luminous Flux [1] I_F = 540 mA max. Φ_V
SS	2240 lm	2400 lm
ST	2400 lm	2590 lm
SU	2590 lm	2800 lm
TP	2800 lm	3040 lm

Chromaticity Coordinate Groups [5)]



Chromaticity Coordinate Groups

Group	Cx	Cy	CCT
30S3	0.4387	0.4032	3000
	0.4339	0.4090	3000
	0.4330	0.4083	3000
	0.4323	0.4076	3000
	0.4317	0.4070	3000
	0.4312	0.4064	3000
	0.4308	0.4058	3000
	0.4303	0.4053	3000
	0.4299	0.4047	3000
	0.4295	0.4040	3000
	0.4291	0.4032	3000
	0.4391	0.4041	3000
	0.4287	0.4023	3000
	0.4283	0.4011	3000
	0.4279	0.3998	3000
	0.4279	0.3982	3000
	0.4285	0.3967	3000
	0.4297	0.3960	3000

Group	Cx	Cy	CCT
	0.4313	0.3961	3000
	0.4327	0.3967	3000
	0.4339	0.3974	3000
	0.4348	0.3981	3000
	0.4395	0.4053	3000
	0.4355	0.3988	3000
	0.4361	0.3994	3000
	0.4366	0.4000	3000
	0.4371	0.4006	3000
	0.4375	0.4011	3000
	0.4379	0.4018	3000
	0.4383	0.4024	3000
	0.4399	0.4066	3000
	0.4399	0.4082	3000
	0.4393	0.4097	3000
	0.4381	0.4104	3000
	0.4365	0.4103	3000
	0.4351	0.4097	3000

Group	Cx	Cy	CCT
40S3	0.3866	0.3796	4000
	0.3818	0.3855	4000
	0.3809	0.3847	4000
	0.3802	0.3840	4000
	0.3796	0.3833	4000
	0.3792	0.3828	4000
	0.3787	0.3822	4000
	0.3783	0.3816	4000
	0.3779	0.3810	4000
	0.3775	0.3804	4000
	0.3770	0.3796	4000
	0.3871	0.3805	4000
	0.3765	0.3787	4000
	0.3760	0.3775	4000
	0.3756	0.3760	4000
	0.3753	0.3742	4000
	0.3758	0.3725	4000
	0.3772	0.3717	4000

Group	Cx	Cy	CCT
	0.3790	0.3720	4000
	0.3806	0.3729	4000
	0.3818	0.3738	4000
	0.3827	0.3745	4000
	0.3876	0.3817	4000
	0.3834	0.3752	4000

Group	Cx	Cy	CCT
	0.3840	0.3759	4000
	0.3845	0.3764	4000
	0.3849	0.3770	4000
	0.3853	0.3776	4000
	0.3857	0.3782	4000
	0.3861	0.3788	4000

Group	Cx	Cy	CCT
	0.3880	0.3832	4000
	0.3883	0.3850	4000
	0.3878	0.3867	4000
	0.3864	0.3875	4000
	0.3846	0.3872	4000
	0.3830	0.3863	4000

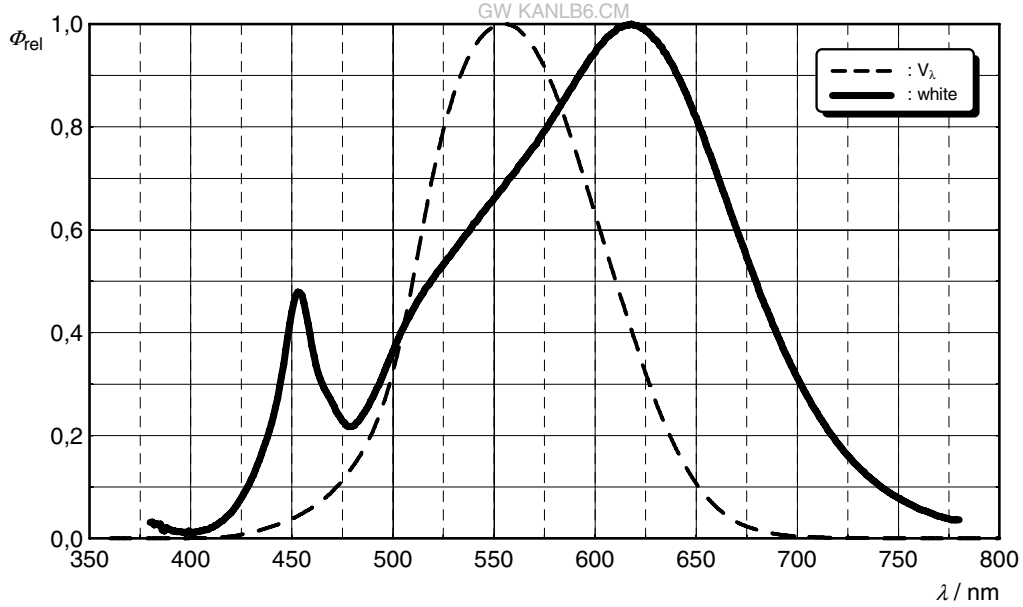
Group Name on Label

Example: SS-30S3

Brightness	Color Chromaticity
SS	30S3

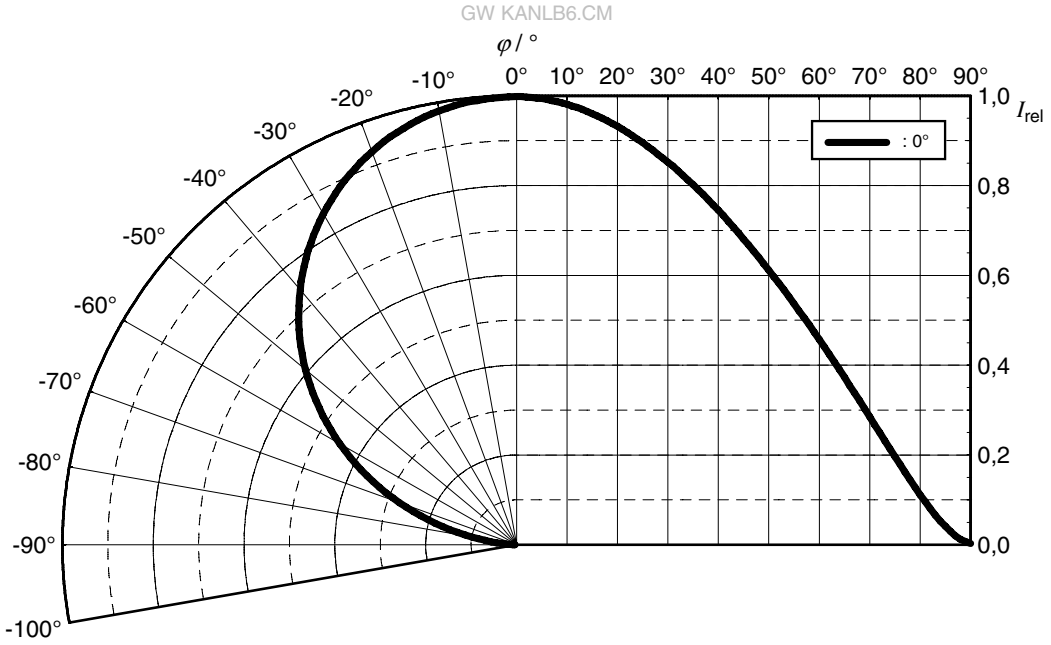
Relative Spectral Emission [6)]

$\Phi_{rel} = f(\lambda)$; I_F = 540 mA; T_J = 85 °C



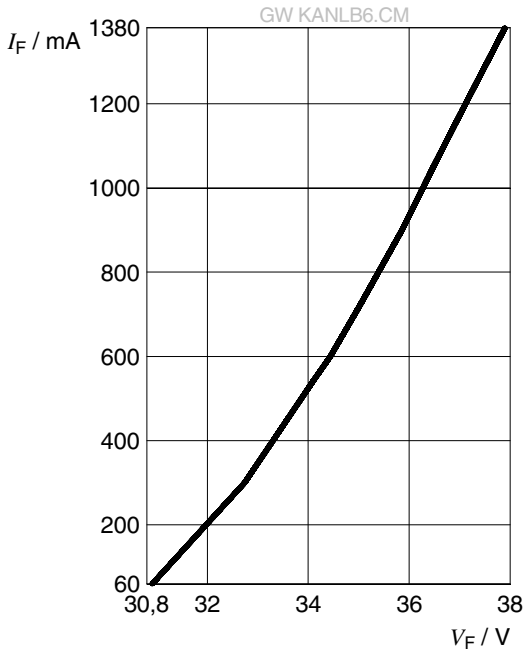
Radiation Characteristics [6)]

$I_{rel} = f(\phi)$; T_J = 85 °C



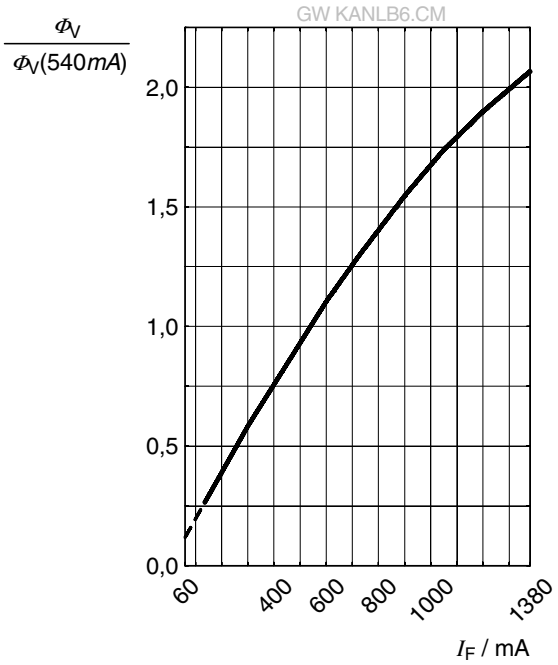
Forward current [6]

$I_F = f(V_F)$; T_J = 85 °C



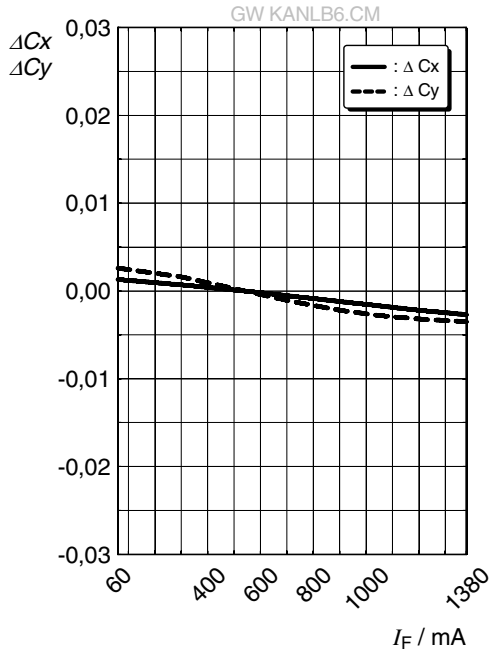
Relative Luminous Flux [6], [7]

$\Phi_v/\Phi_v(540\ mA) = f(I_F)$; T_J = 85 °C



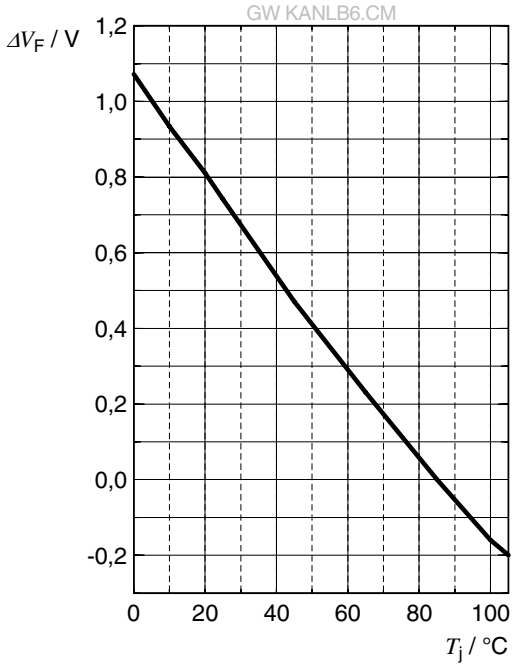
Chromaticity Coordinate Shift [6]

ΔCx, ΔCy = $f(I_F)$; T_J = 85 °C



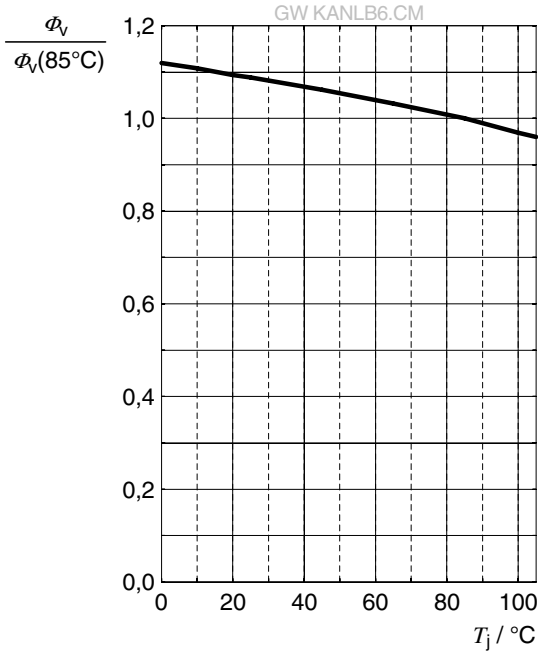
Forward Voltage [6)]

$\Delta V_F = V_F - V_F(85\ °C) = f(T_j);\ I_F = 540\ mA$



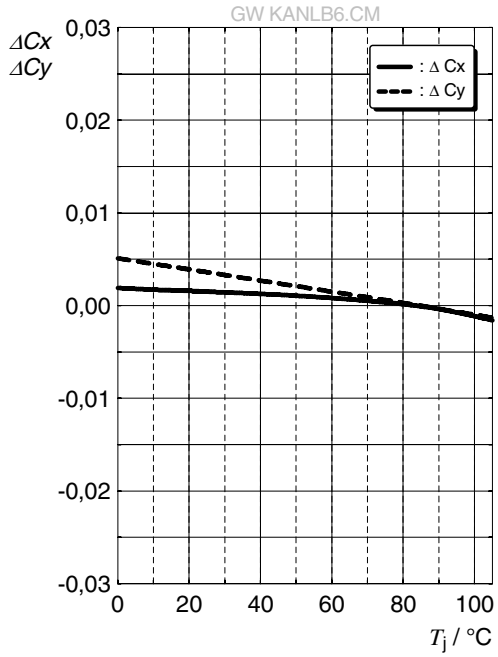
Relative Luminous Flux [6)]

$\Phi_v/\Phi_v(85\ °C) = f(T_j);\ I_F = 540\ mA$



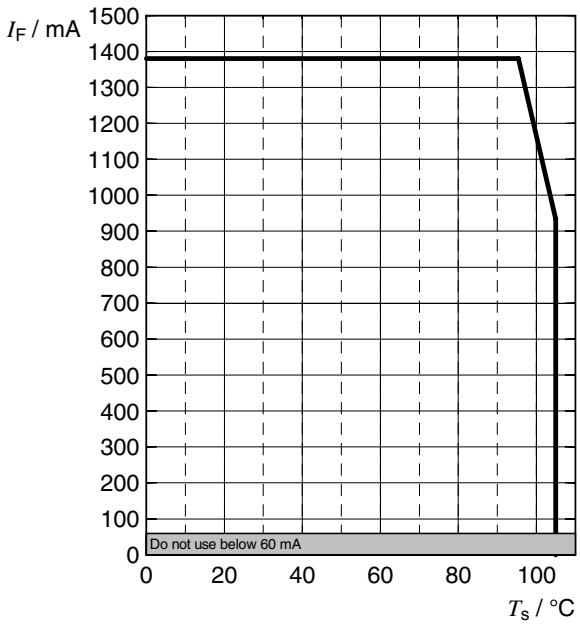
Chromaticity Coordinate Shift [6)]

$\Delta Cx, \Delta Cy = f(T_j);\ I_F = 540\ mA$

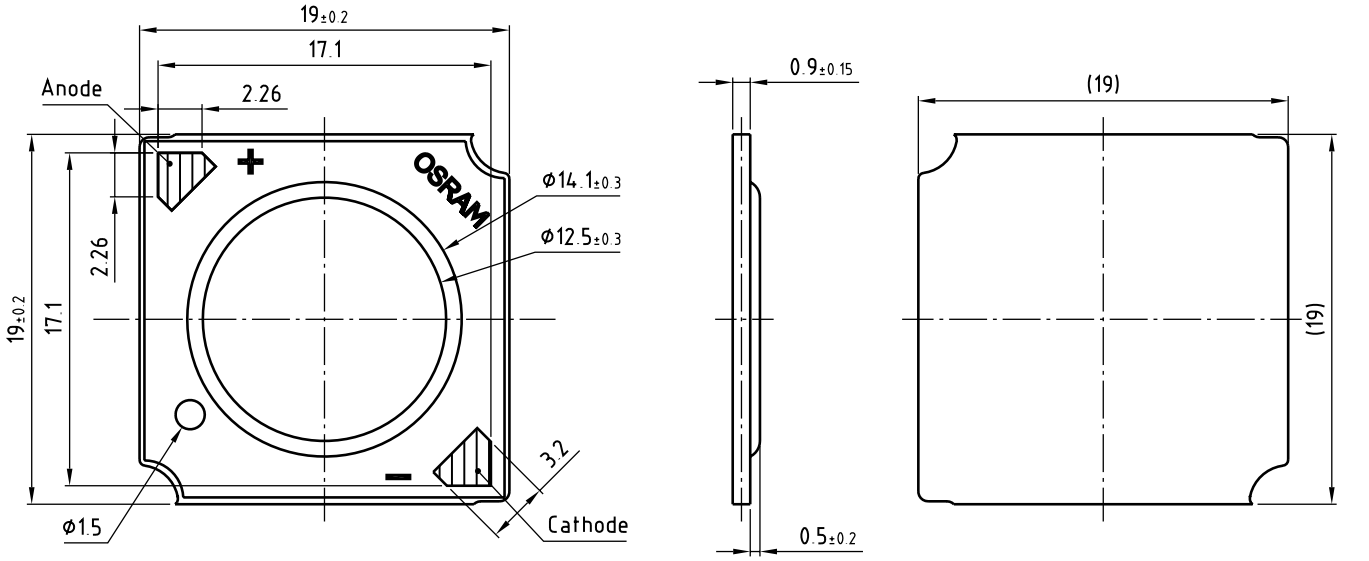


Max. Permissible Forward Current

$I_F = f(T)$



Dimensional Drawing [8)]



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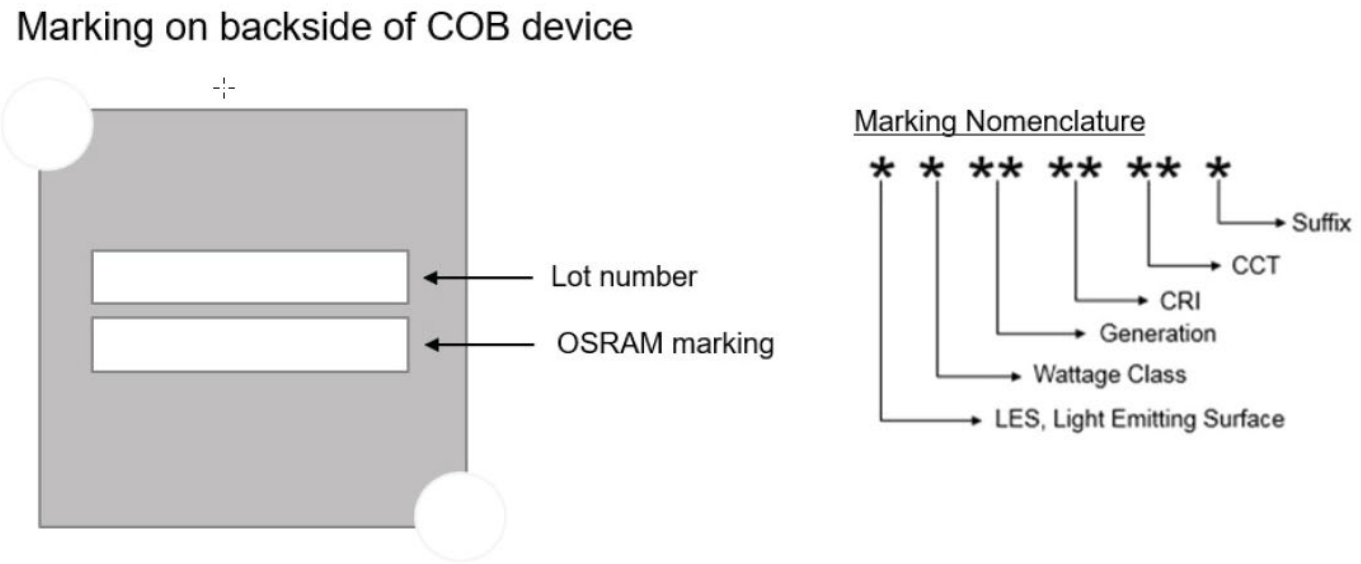
Dimensional Drawing [8)]

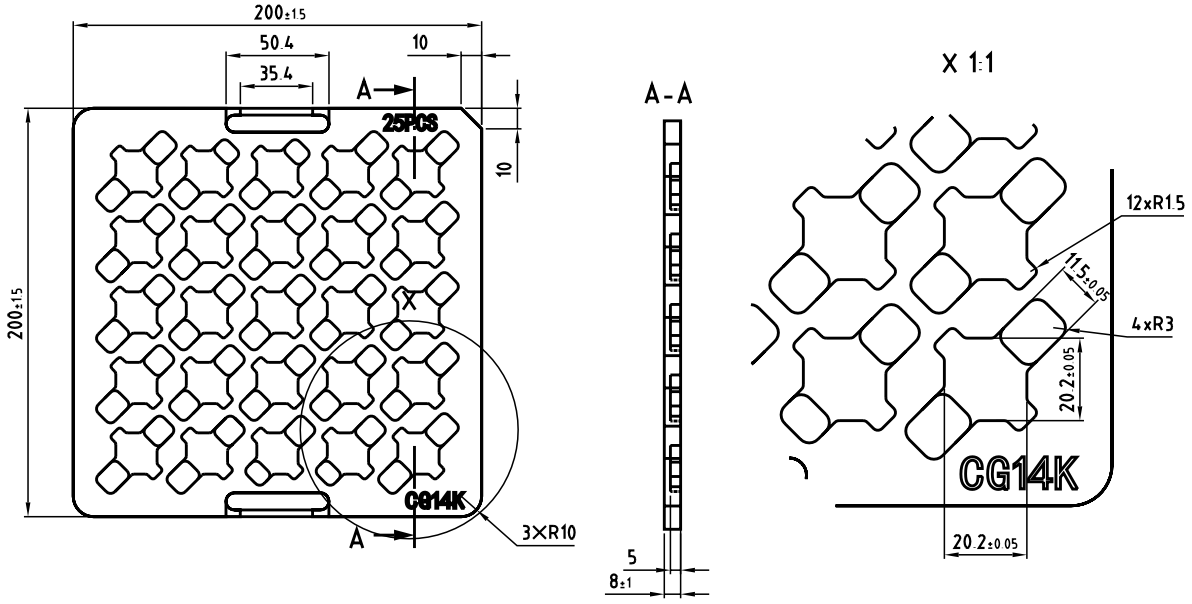


Further Information:

Approximate Weight: 944.5 mg

Tray [8)]

25 pieces per tray



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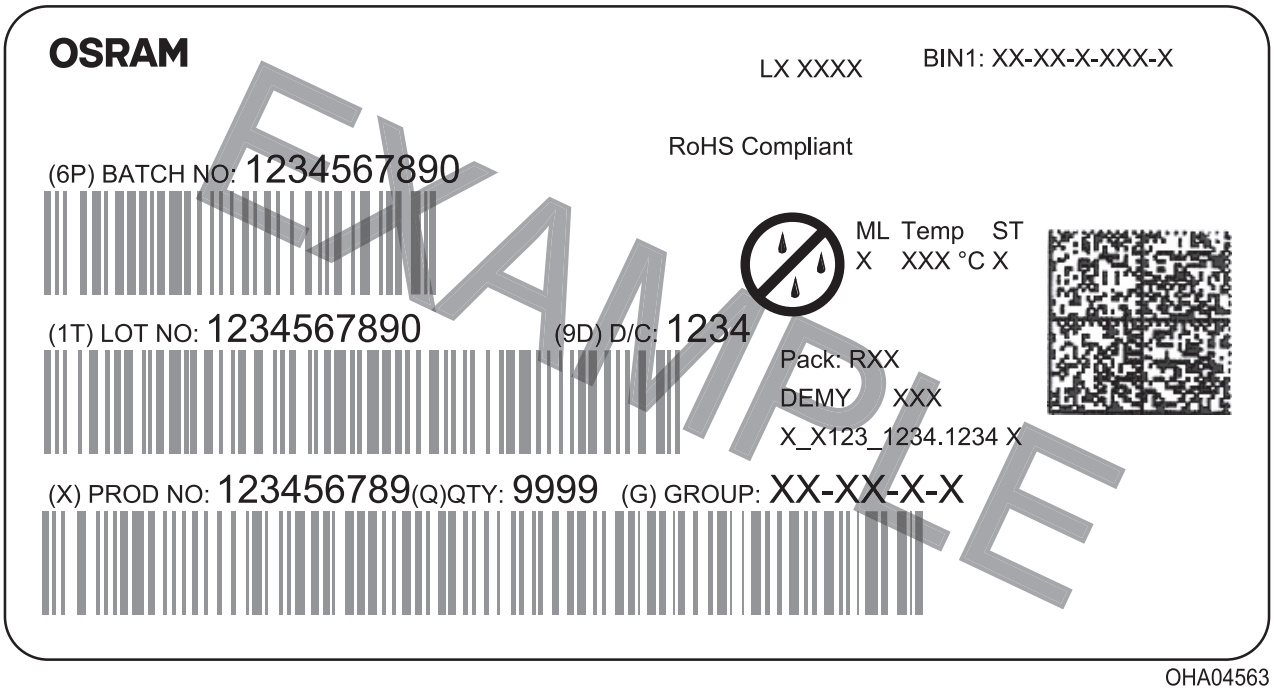
Barcode-Product-Label (BPL)



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Notes

The evaluation of eye safety occurs according to the standard IEC 62471:2006 (photo biological safety of lamps and lamp systems). Within the risk grouping system of this IEC standard, the device specified in this data sheet fall into the class **moderate risk (exposure time 0.25 s)**. Under real circumstances (for exposure time, conditions of the eye pupils, observation distance), it is assumed that no endangerment to the eye exists from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect. When looking at bright light sources (e.g. headlights), temporary reduction in visual acuity and afterimages can occur, leading to irritation, annoyance, visual impairment, and even accidents, depending on the situation.

Subcomponents of this device contain, in addition to other substances, metal filled materials including silver. Metal filled materials can be affected by environments that contain traces of aggressive substances. Therefore, we recommend that customers minimize device exposure to aggressive substances during storage, production, and use. Devices that showed visible discoloration when tested using the described tests above did show no performance deviations within failure limits during the stated test duration. Respective failure limits are described in the IEC60810.

This device is designed for specific/recommended applications only. Please consult OSRAM Opto Semiconductors Sales Staff in advance for detailed information on other non-recommended applications (e.g. automotive).

Change management for this component is aligned with the requirements of the lighting market.

For further application related information please visit www.osram-os.com/appnotes

Disclaimer

Attention please!

The information describes the type of component and shall not be considered as assured characteristics.
Terms of delivery and rights to change design reserved. Due to technical requirements components may contain dangerous substances.
For information on the types in question please contact our Sales Organization.
If printed or downloaded, please find the latest version on our website.

Packing

Please use the recycling operators known to you. We can also help you – get in touch with your nearest sales office. By agreement we will take packing material back, if it is sorted. You must bear the costs of transport. For packing material that is returned to us unsorted or which we are not obliged to accept, we shall have to invoice you for any costs incurred.

Product and functional safety devices/applications or medical devices/applications

Our components are not developed, constructed or tested for the application as safety relevant component or for the application in medical devices.
Our products are not qualified at module and system level for such application.

In case buyer – or customer supplied by buyer – considers using our components in product safety devices/ applications or medical devices/applications, buyer and/or customer has to inform our local sales partner immediately and we and buyer and /or customer will analyze and coordinate the customer-specific request between us and buyer and/or customer.

Glossary

1) **Brightness:** Brightness values are measured during a current pulse of typically 10 ms, with a tolerance of +/- 7%.

2) **Reverse Operation:** Not designed for reverse operation. Continuous reverse operation can cause migration and damage of the device.

3) **Forward Voltage:** The Forward voltage is measured during a current pulse duration of typically 1 ms with a tolerance of ± 0.05V .

4) **Color reproduction index:** Color reproduction index values (CRI-RA) are measured during a current pulse of typically 10 ms and with a tolerance of ±2.

5) **Chromaticity coordinate groups:** Chromaticity coordinates are measured during a current pulse of typically 25 ms, with an internal reproducibility of ±0.005 and an expanded uncertainty of ±0.01 (acc. to GUM with a coverage factor of k = 3).

6) **Typical Values:** Due to the special conditions of the manufacturing processes of semiconductor devices, 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.

7) **Characteristic curve:** In the range where the line of the graph is broken, you must expect higher differences between single devices within one packing unit.

8) **Tolerance of Measure:** Unless otherwise noted in drawing, tolerances are specified with ±0.1 and dimensions are specified in mm.

Revision History

Version	Date	Change
1.0	2020-09-14	Initial Version
1.0	2020-09-23	Initial Version
1.0	2020-10-02	Initial Version
1.1	2022-09-28	New Layout Applications
1.2	2023-02-07	Ordering Information

EU RoHS and China RoHS compliant product
此产品符合欧盟 RoHS 指令的要求；
按照中国的相关法规和标准，
不含有毒有害物质或元素。

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