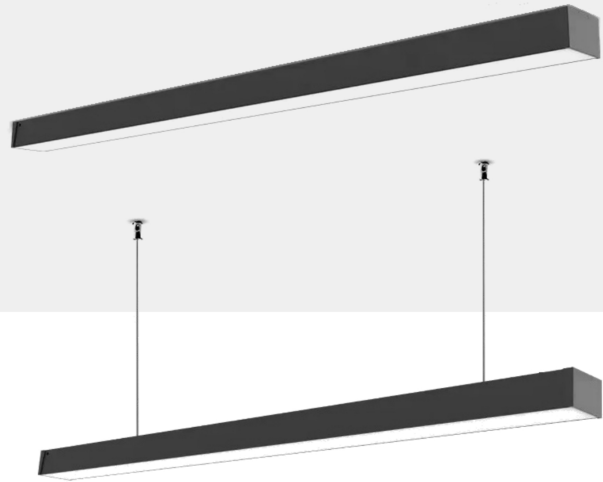


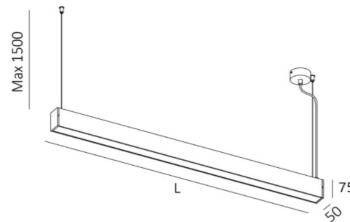
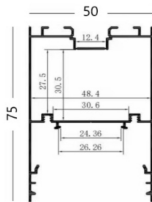
INTERIOR LED LINEAR DOWN LIGHTING

L05075



- IP20
- CLASS III
- Surface Mounted | Ceiling Suspended (cable L1500mm)
- 220-240V 50/60Hz 20V-54V DC
- Aluminium extrusion material and powder coating
- Eyes friendly CE certificate RoHS standard
- OSRAM branded 2835 LED CRI85
- Triac | 0/1-10V | DALI dimmable
- Customized color finishing is acceptable
- Warranty 5 Years

CUTTABLE PC DIFFUSER | UNIFORM DISTRIBUTION



Code	System Power W	Output Lumen lm	Dimension mm	Cut Hole mm	Power Supply mA
L05075 -20	20W	2200lm	□ 50x75xL1000mm	□ mm	500mA
L05075 -30	30W	3300lm	□ 50x75xL1200mm	□ mm	600mA
L05075 -36	36W	3900lm	□ 50x75xL1200mm	□ mm	700mA

FEATURES

Aluminum material with a thickness of 1.0mm -Built in LED Driver -economical version - OSRAM 2835LED CRI85 (192pcs L1200mm), Excellent cooling system. Uniform distribution. The basic model comes in matt white or matt black color finishing, and in length of L1000/L1200, Ceiling Suspended | Ceiling Mounted installation. Customized color finishing are possible depending on the request and the quantity to match the specific look and feel of your design. Cuttable PC diffuser, it allows installers to cut it to the desired length. The seamless connection creates a uniform appearance without any dark areas or dark point. Standard length of cable L1500mm for ceiling suspended installation. Standard CCT 2700K | 3000K | 3500K | 5000K | 5700K | 6500K Customized Up and Down light. LC 38/400-700/54 flexC Ip SNC4

Built-in Driver

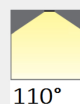
- 20W 500mA
- 30W 600mA
- 36W 700mA

Accessoires



LED CHIPS GW JTLMS1.EM
Driver LC 38W 400-700mA flexC Ip SNC4

Beam Angle



Color Temperature

- 2700K
- 3000K
- 4000K
- 5000K
- 6000K

Finishes

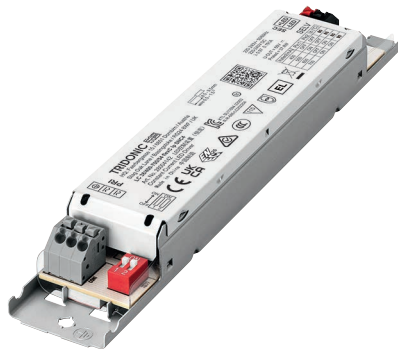
- Black
- White
- Customized



Driver LC 38W 400-700mA flexC Ip SNC4
essence series SELV

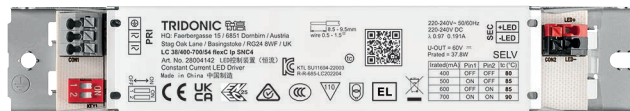
Product description

- Constant current built-in LED driver
- For luminaires of protection class I and protection class II
- Temperature protection as per EN 61347-2-13 C5e
- Selectable fixed output current 700, 600, 500 and 400 mA
- Max. output power 37.8 W
- Up to 86.5 % efficiency
- Nominal lifetime up to 50,000 h
- 5 years guarantee (conditions at www.tridonic.com)



Housing properties

- Casing: metal, white
- Type of protection IP20



Functions

- Overload protection
- Short-circuit protection
- No-load protection



Standards, page 3

Wiring diagrams and installation examples, page 4

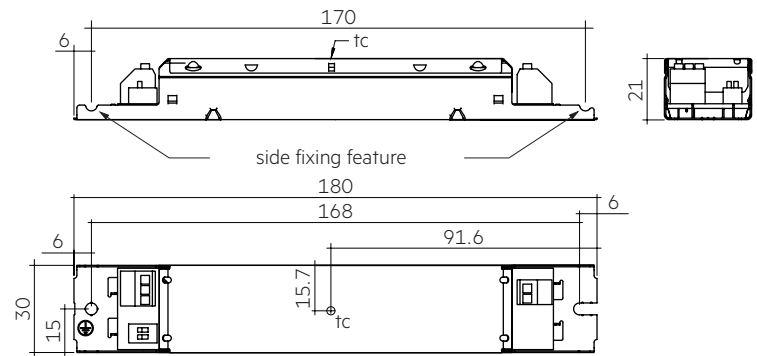


IP20 SELV 

Driver LC 38W 400-700mA flexC Ip SNC4
essence series SELV

Technical data

Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
DC voltage range	176 – 280 V
Input current (at 230 V, 50 Hz, full load) ^①	0.191 A
Leakage current (at 230 V, 50 Hz, full load)	< 450 µA
Touch current (equipotential connected) ^②	450 µA
Mains frequency	0 / 50 / 60 Hz
Overvoltage protection	320 V AC, 2 h
Output power range	8 – 37.8 W
Typ. efficiency (at 230 V / 50 Hz / full load) ^①	86.5 %
λ (at 230 V, 50 Hz, full load) ^①	0.97
Output current tolerance ^③	± 7.5 %
Max. output voltage	60 V
THD (at 230 V, 50 Hz, full load) ^①	< 12 %
Max. peak output current at full load ^④	790 mA
Output LF current ripple (< 120 Hz) at full load	± 5 %
Output P _{ST} ^{LM} (at full load)	≤ 1
Output SVM (at full load)	≤ 0.4
Starting time (at 230 V, 50 Hz, full load)	≤ 0.5 s
Starting time (DC mode)	≤ 0.6 s
Switchover time (AC/DC)	≤ 0.6 s
Turn off time (at 230 V, 50 Hz, full load)	≤ 0.5 s
Hold on time at power failure (output)	0 s
Ambient temperature t _a (at lifetime 50,000 h)	50 °C
Storage temperature t _s	-40 ... +80 °C
Mains burst capability	1 kV
Mains surge capability (between L – N)	1 kV
Mains surge capability (between L/N – PE)	2 kV
Surge voltage at output side (against PE)	3 kV
Lifetime	up to 50,000 h
Guarantee (conditions at www.tridonic.com)	5 years
Dimensions L x W x H	180 x 30 x 21 mm
Hole spacing D	168 mm



Ordering data

Type	Article number	Packaging, carton	Packaging, pallet	Weight per pc.
LC 38/400-700/54 flexC Ip SNC4	28004142	50 pc(s).	5,200 pc(s).	0.128 kg

Specific technical data

Type	Output current ^④	Min. forward voltage	Max. forward voltage	Max. output power	Typ. power consumption (at 230 V, 50 Hz, full load)	Typ. current consumption (at 230 V, 50 Hz, full load)	Max. casing temperature t _c	Ambient temperature t _a max.	load select
LC 38/400-700/54 flexC Ip SNC4	400 mA	20 V	54 V	21.6 W	24.5 W	114 mA	80 °C	-20 ... +60 °C	1=off / 2=off
	500 mA	20 V	54 V	27.0 W	30.8 W	140 mA	85 °C	-20 ... +60 °C	1=on / 2=off
	600 mA	20 V	54 V	32.4 W	37.0 W	166 mA	85 °C	-20 ... +60 °C	1=off / 2=on
	700 mA	20 V	54 V	37.8 W	42.8 W	191 mA	90 °C	-20 ... +60 °C	1=on / 2=on

^① Test result at 700 mA.

^② Maximum of „perception and reaction“ and „let go“ values according to EN 60598-1.

^③ Test result at 25 °C.

^④ Output current is mean value.

1. Standards

EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-1
EN 61347-2-13
EN 61547
EN 62384

According to EN 50172 for use in central battery systems

According to EN 60598-2-22 suitable for emergency lighting installations

2. Thermal details and lifetime

Expected lifetime

Type	Output current	ta	40 °C	50 °C	60 °C
LC 38/400-700/54 flexC Ip SNC4	400 mA	tc	60 °C	70 °C	80 °C
		Lifetime	> 50,000 h	> 50,000 h	30,000 h
	500 mA	tc	65 °C	75 °C	85 °C
		Lifetime	> 50,000 h	> 50,000 h	30,000 h
	600 mA	tc	65 °C	75 °C	85 °C
		Lifetime	> 50,000 h	> 50,000 h	30,000 h
	700 mA	tc	70 °C	80 °C	90 °C
		Lifetime	> 50,000 h	> 50,000 h	30,000 h

The LED driver is designed for a lifetime stated above under reference conditions and with a failure probability of less than 10 %.

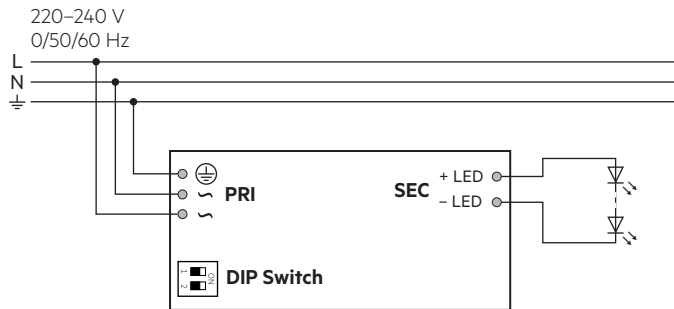
The relation of tc to ta temperature depends also on the luminaire design.

If the measured tc temperature is approx. 5 K below tc max., ta temperature should be checked and eventually critical components (e.g. ELCAP) measured.

Detailed information on request.

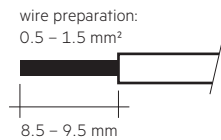
3. Installation / wiring

3.1 Circuit diagram



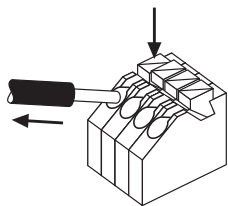
3.2 Wiring type and cross section

For wiring use stranded wire with ferrules or solid wire from 0.5 – 1.5 mm². Strip 8.5 – 9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.



3.3 Release of the wiring

Press down the “push button” and remove the cable from front.



3.4 Wiring guidelines

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Mains leads should be kept apart from LED driver and other leads (ideally 5 – 10 cm distance)
- Max. length of output wires is 2 m.
- Incorrect wiring can damage LED modules.
- To avoid the damage of the Driver, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

3.5 Earth connection

The earth connection is conducted as protection earth (PE). The LED driver can be earthed via metal housing. Ground the LED driver with protective earth (PE).

- Electromagnetic interferences (EMI)
- Transmission of mains transients to the LED output

In general it is recommended to earth the LED driver if the LED module is mounted on earthed luminaire parts respectively heat sinks and thereby representing a high capacity against earth.

3.6 Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 30 seconds
4. Connect LED module again

Hot plug-in or output switching of LEDs is not permitted and may cause a very high current to the LEDs.

3.7 Mounting of device

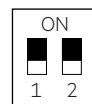
Max. torque for fixing: 0.5 Nm/M4

3.8 Current setting

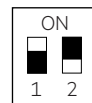


Set the current by DIP switch after mains off.
Use of DIP switch only after mains off.

400 mA: Switch 1 = Off, Switch 2 = Off



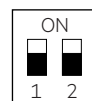
500 mA: Switch 1 = On, Switch 2 = Off



600 mA: Switch 1 = Off, Switch 2 = On

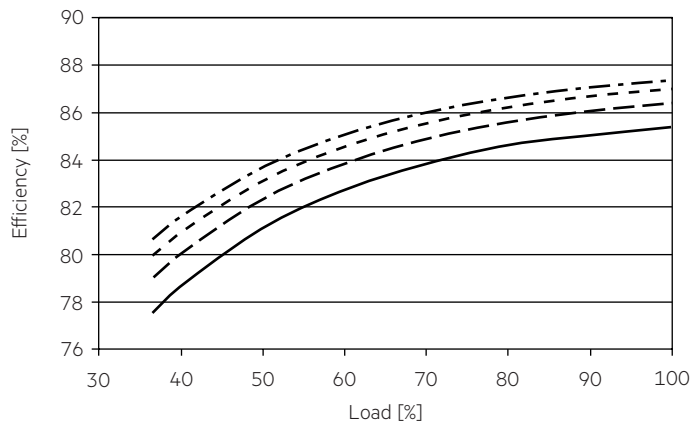


700 mA: Switch 1 = On, Switch 2 = On

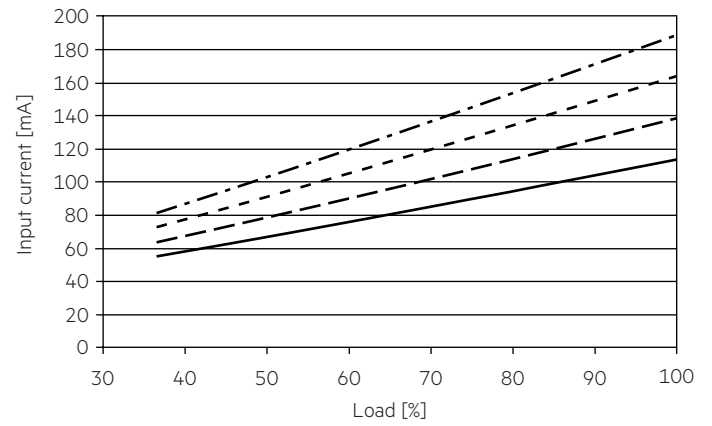


4. Electrical values

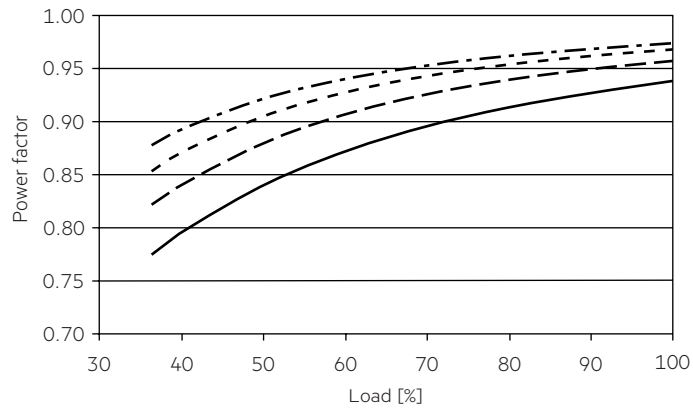
4.1 Efficiency vs load



4.4 Input current vs load

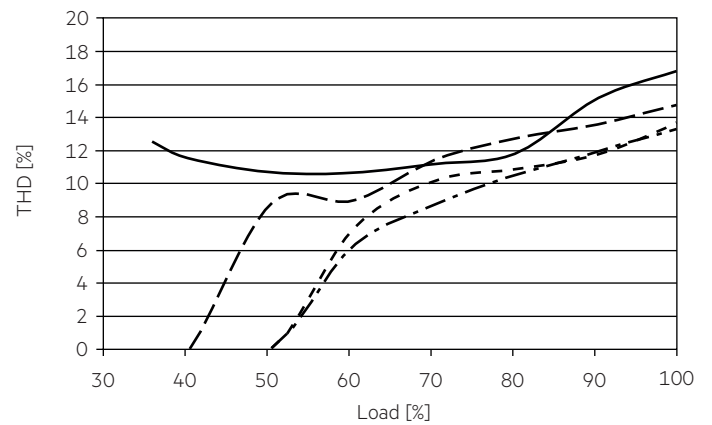


4.2 Power factor vs load

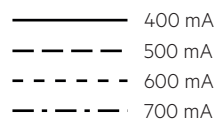
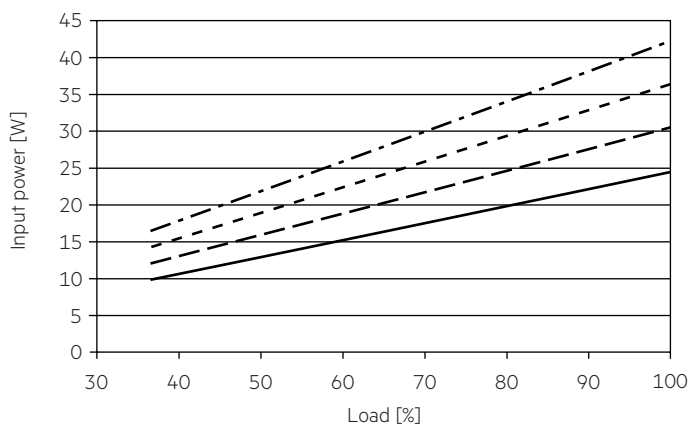


4.5 THD vs load (without harmonic < 5 mA or 0.6 % of the input current)

THD without harmonic < 5 mA (0.6 %) of the input current:



4.3 Input power vs load



4.6 Maximum loading of automatic circuit breakers in relation to inrush current

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current	
Installation Ø	1.5 mm ²	1.5 mm ²	2.5 mm ²	2.5 mm ²	1.5 mm ²	1.5 mm ²	2.5 mm ²	2.5 mm ²	I _{max}	Time
LC 38/400-700/54 flexC Ip SNC4	37	48	59	74	37	48	59	74	15 A	100 µs

These are max. values calculated out of continuous current running the device on full load. There is no limitation due to in-rush current. If load is smaller than full load for calculation only continuous current has to be considered.

4.7 Harmonic distortion in the mains supply (at 230 V / 50 Hz and full load) in %

	THD	3.	5.	7.	9.	11.
LC 38/400-700/54 flexC Ip SNC4	< 12	< 10	< 4	< 4	< 2	< 2

Acc. to 6100-3-2. Harmonics < 5 mA or < 0.6 % (whatever is greater) of the input current are not considered for calculation of THD.

5. Functions

5.1 Short-circuit behaviour

In case of a short circuit on the output side (LED) the LED driver switches off. After elimination of the short-circuit fault the LED driver will recover automatically.

5.2 No-load operation

The LED driver works in burst working mode to provide a constant output voltage regulation which allows the application to be able to work safely when LED string opens due to a failure.

5.3 Overload protection

If the maximum load is exceeded by a defined internal limit, the LED driver will protect itself and LED may flicker. After elimination of the overload, the nominal operation is restored automatically.

5.4 DC emergency operation

The LED driver is designed to operate on DC voltage and pulsed DC voltage. For a reliable operation, make sure that also in DC emergency operation the LED driver is run within the specified conditions.

Light output level in DC operation (E_{OF,DC}): 95 % (cannot be adjusted)

The voltage-dependent input current of Driver incl. LED module is depending on the used load.

The voltage-dependent no-load current of Driver (without or defect LED module) is for:

AC: < 20 mA
DC: < 7 mA

6. Miscellaneous

6.1 Insulation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an insulation test with 500 V_{DC} for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal. The insulation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V_{AC} (or 1.414 x 1500 V_{DC}). To avoid damage to the electronic devices this test must not be conducted.

6.2 Conditions of use and storage

Humidity: 5 % up to max. 85%,
not condensed
(max. 56 days/year at 85%)

Storage temperature: -40 °C up to max. +80 °C

The devices have to be within the specified temperature range (t_a) before they can be operated.

The LED driver is declared as inbuilt LED controlgear, meaning it is intended to be used within a luminaire enclosure.

If the product is used outside a luminaire, the installation must provide suitable protection for people and environment (e.g. in illuminated ceilings).

6.3 Maximum number of switching cycles

All LED driver are tested with 50,000 switching cycles.

6.4 Additional information

Additional technical information at www.tridonic.com → Technical Data

Lifetime declarations are informative and represent no warranty claim. No warranty if device was opened.

GW JTLMS1.EM

DURIS® E 2835

The DURIS® E 2835 combines good efficacy and a wide beam angle into a compact format (2.8 mm x 3.5 mm). This is key to homogeneous illumination applications where the DURIS® E 2835 never fails to impress with its performance on system level.



Applications

- Area Lights
- Downlights/Spotlights
- Table Lamp

Features:

- Package: white SMT package, colored diffused silicone resin
- Typ. Radiation: 120° (Lambertian emitter)
- Color temperature: 2200K - 6500K
- CRI: 80 (min.), 85 (typ.), R9: 0 (min.)
- Lumen maintenance: Test results according to IESNA LM-80 available
- ESD: 2 kV acc. to ANSI/ESDA/JEDEC JS-001 (HBM, Class 2)
- Luminous Flux: typ.: 29.2 lm @ 4000 K
- Luminous efficacy: typ.: 165 lm/W @ 4000 K

Ordering Information

Type	Color temperature	Luminous Flux ¹⁾ $I_F = 60 \text{ mA}$ Φ_V	Ordering Code
GW JTLMS1.EM-G7H1-XX510-1	2200 K	21.0 ... 30.0 lm	Q65113A2611
GW JTLMS1.EM-G9H2-XX58-1	2700 K	24.0 ... 31.5 lm	Q65113A2612
GW JTLMS1.EM-GVH3-XX57-1	3000 K	25.5 ... 33.0 lm	Q65113A2613
GW JTLMS1.EM-GWH3-XX56-1	3500 K	27.0 ... 33.0 lm	Q65113A2614
GW JTLMS1.EM-GWH4-XX55-1	4000 K	27.0 ... 34.5 lm	Q65113A2616
GW JTLMS1.EM-GWH4-XX53-1	5000 K	27.0 ... 34.5 lm	Q65113A2618
GW JTLMS1.EM-GWH4-XX52-1	5700 K	27.0 ... 34.5 lm	Q65113A2619
GW JTLMS1.EM-GWH4-XX51-1	6500 K	27.0 ... 34.5 lm	Q65113A2621

Maximum Ratings

Parameter	Symbol		Values
Operating Temperature	T_{op}	min.	-40 °C
		max.	100 °C
Storage Temperature	T_{stg}	min.	-40 °C
		max.	100 °C
Junction Temperature	T_j	max.	125 °C
Forward Current $T_j = 25\text{ °C}$	I_F	min.	10 mA
		max.	150 mA
Surge Current $t \leq 10\ \mu\text{s}$; $D = 0.005$; $T_j = 25\text{ °C}$	I_{FS}	max.	200 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

$I_F = 60 \text{ mA}$; $T_J = 25 \text{ °C}$

Parameter	Symbol		Values
Viewing angle at 50% I_V	2ϕ	typ.	120 °
Forward Voltage ³⁾ $I_F = 60 \text{ mA}$	V_F	min. typ. max.	2.80 V 2.95 V 3.30 V
Reverse current ²⁾	I_R		Not designed for reverse operation
Color Rendering Index ⁴⁾	CRI	min. typ.	80 85
Color Rendering Index (R9) ⁴⁾	CRI (R9)	min.	0
Electrical thermal resistance junction/solderpoint with efficiency $\eta_e = 38.9 \%$	$R_{thJS \text{ elec.}}$	typ.	15 K / W

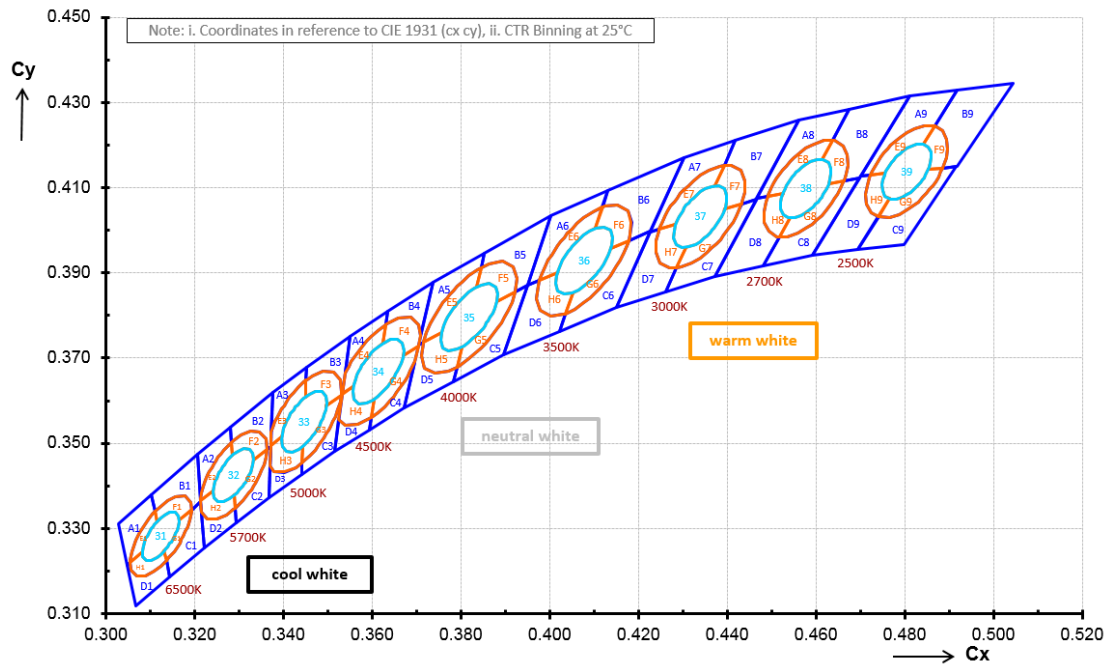
Brightness Groups

Group	Luminous Flux ¹⁾ $I_F = 60 \text{ mA}$ min. Φ_V	Luminous Flux ¹⁾ $I_F = 60 \text{ mA}$ max. Φ_V
G7	21.0 lm	22.5 lm
G8	22.5 lm	24.0 lm
G9	24.0 lm	25.5 lm
GV	25.5 lm	27.0 lm
GW	27.0 lm	28.5 lm
H1	28.5 lm	30.0 lm
H2	30.0 lm	31.5 lm
H3	31.5 lm	33.0 lm
H4	33.0 lm	34.5 lm

Forward Voltage Groups

Group	Forward Voltage ³⁾ $I_F = 60 \text{ mA}$ min. V_F	Forward Voltage ³⁾ $I_F = 60 \text{ mA}$ max. V_F
L1	2.80 V	2.90 V
L2	2.90 V	3.00 V
M1	3.00 V	3.10 V
M2	3.10 V	3.20 V
N1	3.20 V	3.30 V

Chromaticity Coordinate Groups ⁵⁾



Chromaticity Coordinate Groups

CCT	Center Cx	Center Cy	3step a	3step b	5step a	5step b	Ø
2200 K	0.5020	0.4156	0.0072	0.0040	0.0120	0.0067	39.9
2700 K	0.4577	0.4098	0.0080	0.0041	0.0133	0.0068	54.1
3000 K	0.4339	0.4032	0.0086	0.0042	0.0142	0.0069	53.7
3500 K	0.4077	0.3929	0.0093	0.0042	0.0155	0.0069	53.9
4000 K	0.3818	0.3796	0.0094	0.0041	0.0157	0.0068	53.4
5000 K	0.3446	0.3551	0.0081	0.0035	0.0135	0.0059	59.8
5700 K	0.3287	0.3425	0.0072	0.0032	0.0119	0.0052	58.8
6500 K	0.3123	0.3282	0.0066	0.0027	0.0110	0.0045	58.1

CCT	Group	1		2		3		4		5	
		Cx	Cy	Cx	Cy	Cx	Cy	Cx	Cy	Cx	Cy
2200 K	E	0.5088	0.4249	0.4941	0.4156	0.4973	0.4157	0.5061	0.4210		
	F	0.5088	0.4249	0.5101	0.4161	0.5068	0.4160	0.5061	0.4210		
	G	0.5101	0.4161	0.4955	0.4054	0.4981	0.4093	0.5068	0.4158		
	H	0.4981	0.4093	0.4973	0.4157	0.4941	0.4156	0.4955	0.4054		
2700 K	E	0.4637	0.4212	0.4491	0.4081	0.4526	0.4088	0.4613	0.4166		
	F	0.4637	0.4212	0.4663	0.4115	0.4628	0.4108	0.4613	0.4166		
	G	0.4663	0.4115	0.4517	0.3984	0.4541	0.4030	0.4628	0.4108		
	H	0.4541	0.4030	0.4526	0.4088	0.4491	0.4081	0.4517	0.3984		
3000 K	E	0.4393	0.4153	0.4246	0.4002	0.4283	0.4014	0.4371	0.4105		
	F	0.4393	0.4153	0.4432	0.4062	0.4395	0.4050	0.4371	0.4105		
	G	0.4432	0.4062	0.4285	0.3911	0.4307	0.3960	0.4395	0.4050		
	H	0.4307	0.3960	0.4283	0.4014	0.4246	0.4002	0.4285	0.3911		
3500 K	E	0.4118	0.4054	0.3977	0.3883	0.4017	0.3902	0.4102	0.4004		
	F	0.4118	0.4054	0.4177	0.3975	0.4137	0.3957	0.4102	0.4004		
	G	0.4177	0.3975	0.4036	0.3804	0.4052	0.3854	0.4137	0.3957		
	H	0.4052	0.3854	0.4017	0.3902	0.3977	0.3883	0.4036	0.3804		
4000 K	E	0.3845	0.3913	0.3714	0.3737	0.3756	0.3760	0.3834	0.3866		
	F	0.3845	0.3913	0.3922	0.3855	0.3880	0.3832	0.3834	0.3866		
	G	0.3922	0.3855	0.3791	0.3679	0.3802	0.3726	0.3880	0.3832		
	H	0.3802	0.3726	0.3756	0.3760	0.3714	0.3737	0.3791	0.3679		
5000 K	E	0.3451	0.3648	0.3372	0.3528	0.3371	0.3496	0.3396	0.3514	0.3449	0.3609
	F	0.3451	0.3648	0.3530	0.3612	0.3496	0.3588	0.3449	0.3609		
	G	0.3530	0.3612	0.3441	0.3454	0.3443	0.3493	0.3496	0.3588		
	H	0.3443	0.3493	0.3396	0.3514	0.3371	0.3496	0.3369	0.3445	0.3441	0.3454
5700 K	E	0.3283	0.3502	0.3212	0.3373	0.3213	0.3365	0.3242	0.3388	0.3284	0.3471
	F	0.3283	0.3502	0.3363	0.3486	0.3332	0.3462	0.3284	0.3471		
	G	0.3363	0.3486	0.3291	0.3348	0.3290	0.3379	0.3332	0.3462		
	H	0.3291	0.3348	0.3215	0.3337	0.3213	0.3365	0.3242	0.3388	0.3290	0.3379
6500 K	E	0.3110	0.3340	0.3054	0.3220	0.3082	0.3245	0.3115	0.3317		
	F	0.3110	0.3340	0.3192	0.3344	0.3165	0.3319	0.3115	0.3317		
	G	0.3192	0.3344	0.3136	0.3224	0.3131	0.3247	0.3165	0.3319		
	H	0.3136	0.3224	0.3054	0.3220	0.3082	0.3245	0.3131	0.3247		

Group Name on Label

Example: G7-31-L1

Brightness

Color Chromaticity

Forward Voltage

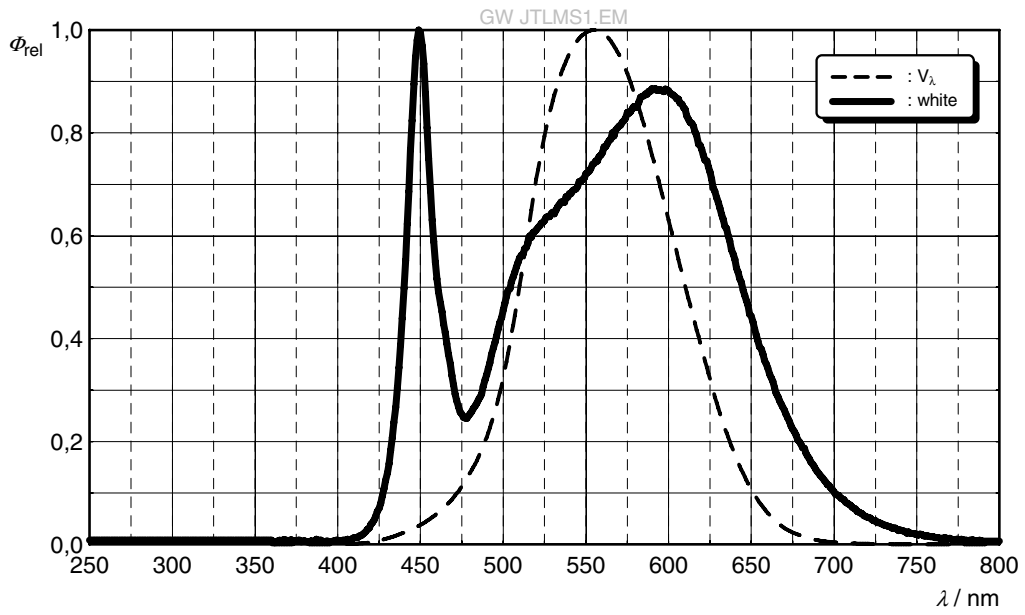
G7

31

L1

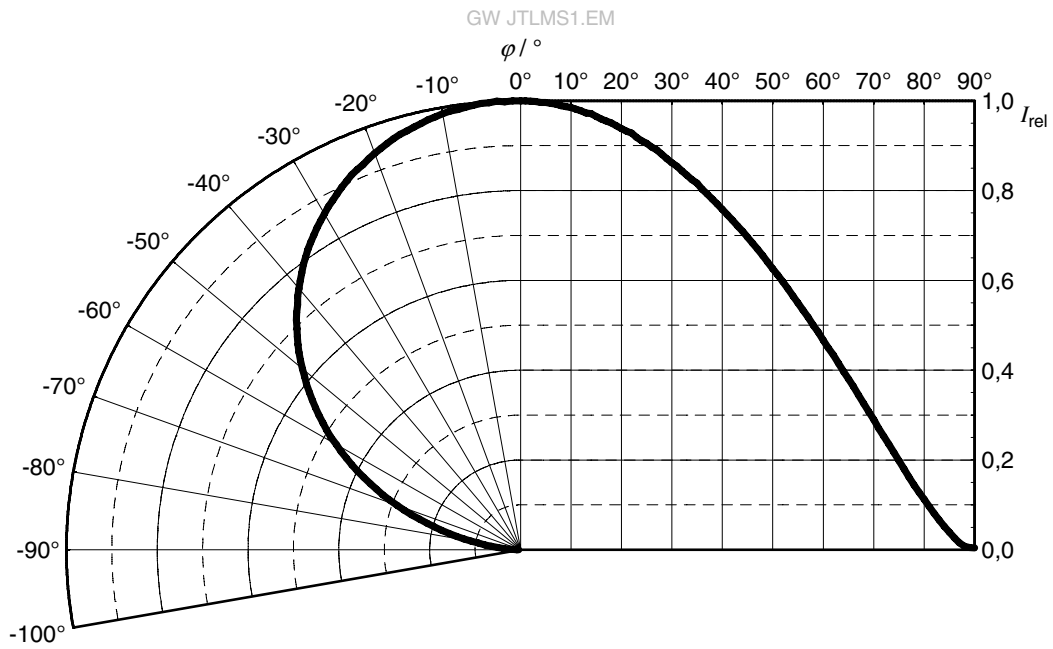
Relative Spectral Emission ⁶⁾

$\Phi_{rel} = f(\lambda); I_F = 60 \text{ mA}; T_J = 25 \text{ }^\circ\text{C}$



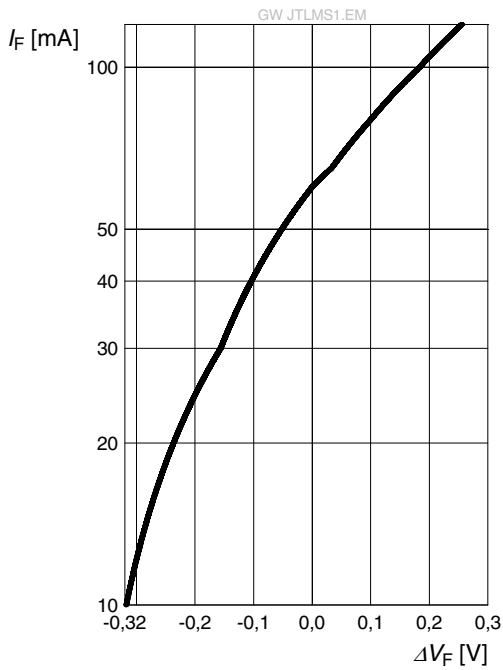
Radiation Characteristics ⁶⁾

$I_{rel} = f(\phi); T_J = 25 \text{ }^\circ\text{C}$



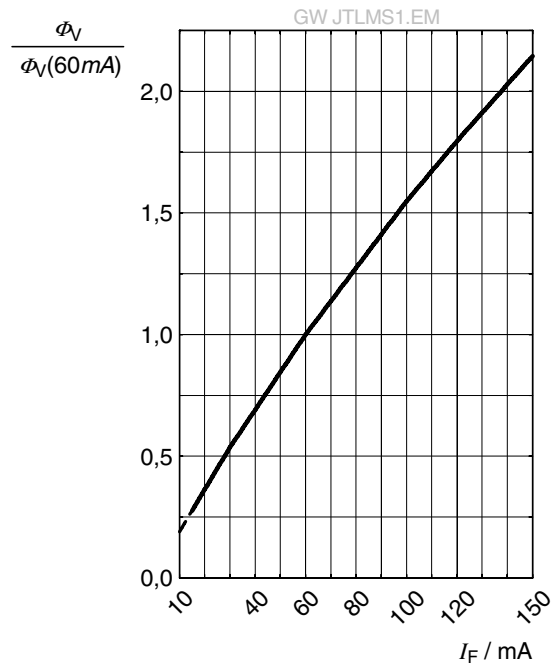
Forward current ⁶⁾

$I_F = f(V_F); T_J = 25\text{ }^\circ\text{C}$



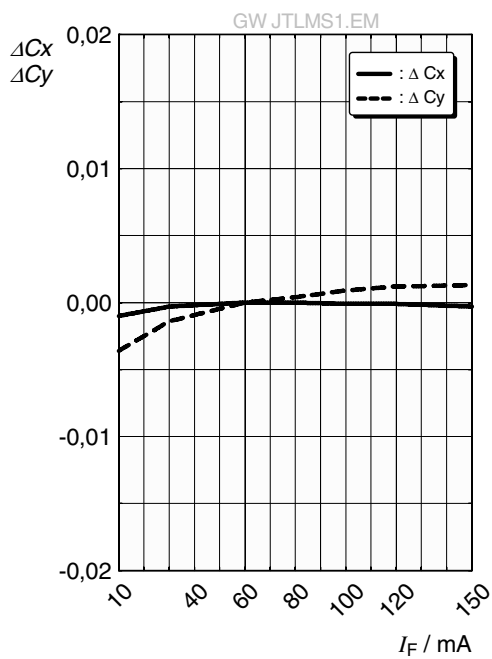
Relative Luminous Flux ^{6), 7)}

$\Phi_V / \Phi_V(60\text{ mA}) = f(I_F); T_J = 25\text{ }^\circ\text{C}$



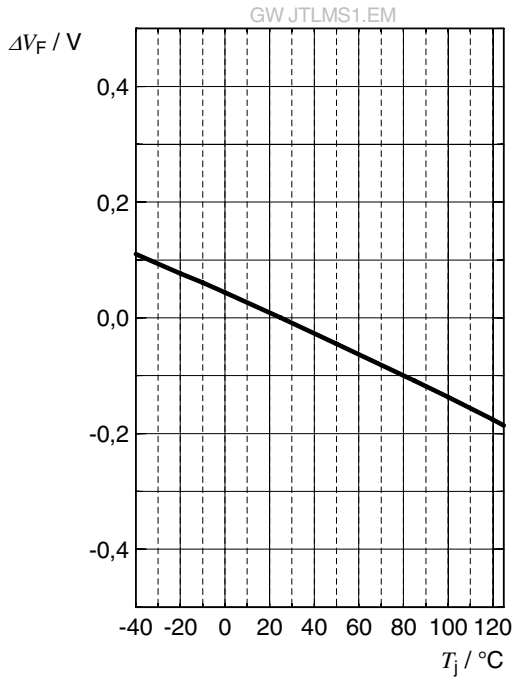
Chromaticity Coordinate Shift ⁶⁾

$\Delta C_x, \Delta C_y = f(I_F); T_J = 25\text{ }^\circ\text{C}$



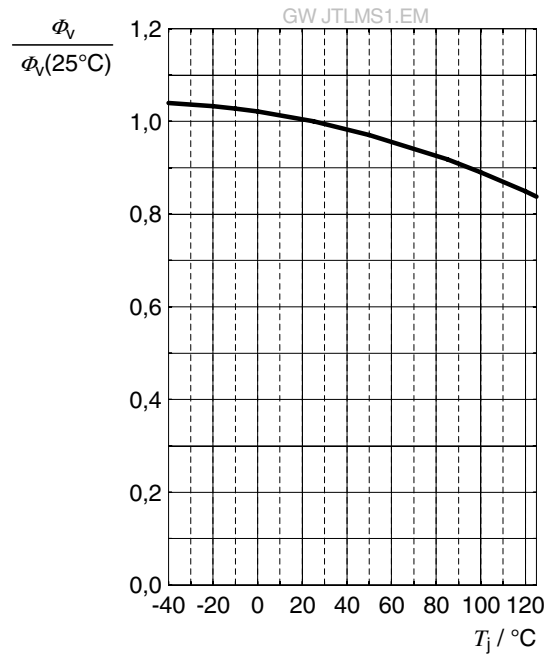
Forward Voltage ⁶⁾

$\Delta V_F = V_F - V_F(25\text{ }^\circ\text{C}) = f(T_j); I_F = 60\text{ mA}$



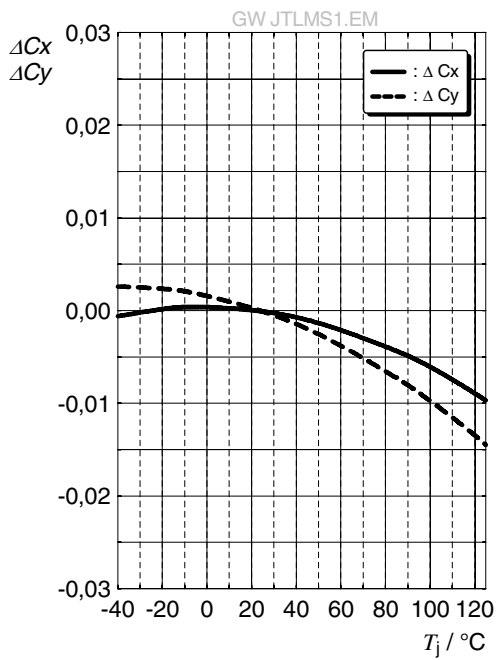
Relative Luminous Flux ⁶⁾

$\Phi_V / \Phi_V(25\text{ }^\circ\text{C}) = f(T_j); I_F = 60\text{ mA}$



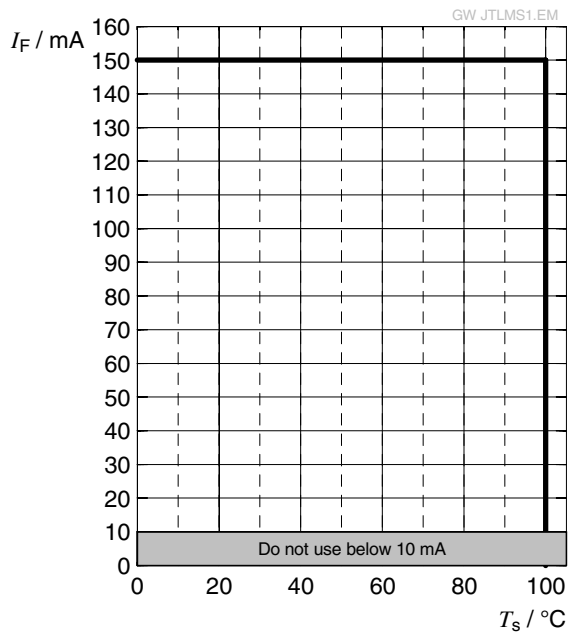
Chromaticity Coordinate Shift ⁶⁾

$\Delta C_x, \Delta C_y = f(T_j); I_F = 60\text{ mA}$

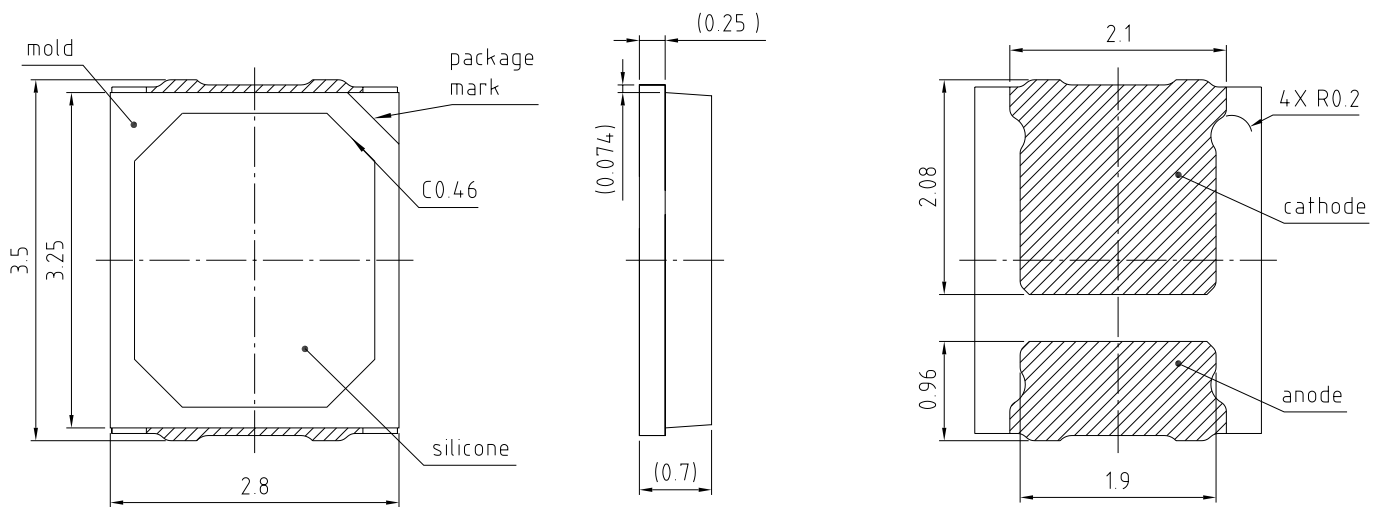


Max. Permissible Forward Current

$$I_F = f(T)$$



Dimensional Drawing ⁸⁾



general tolerance ± 0.1

lead finish Ag 

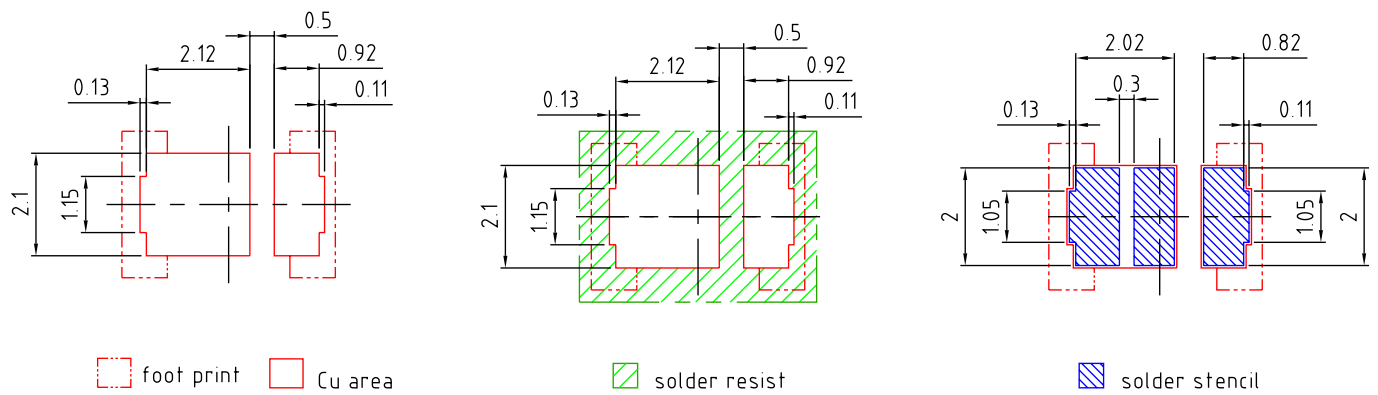
C67062-A0284-A1.-02

Further Information:

Approximate Weight: 20.0 mg

Package marking: Cathode

Recommended Solder Pad ⁸⁾

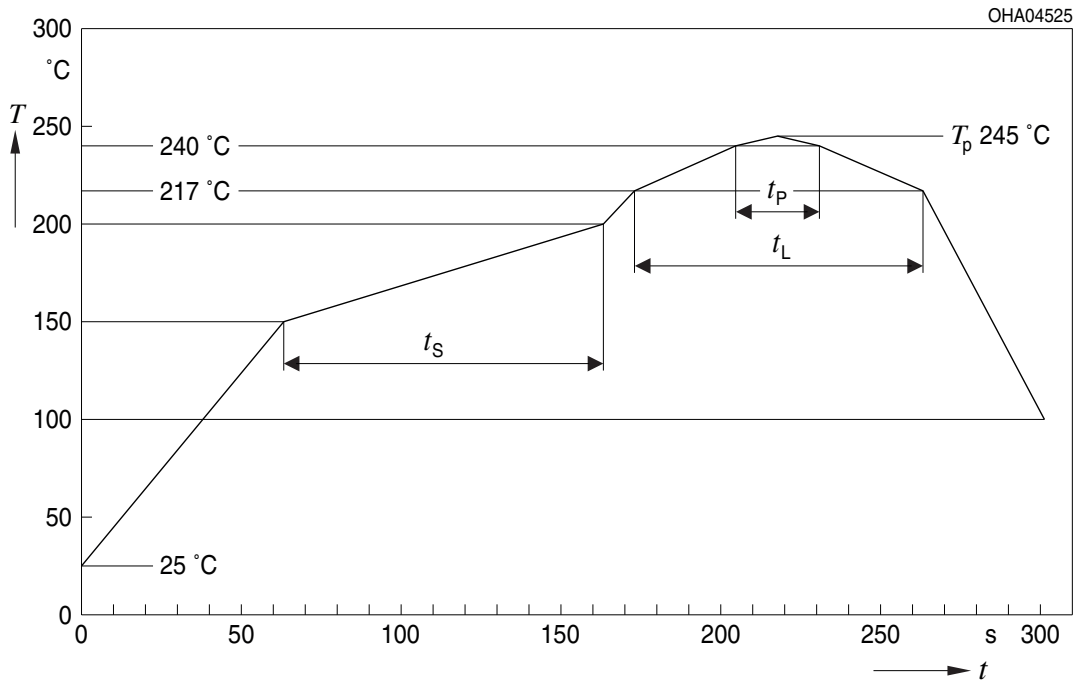


E067.0346.04-01

For superior solder joint connectivity results we recommend soldering under standard nitrogen atmosphere. Package not suitable for ultra sonic cleaning.

Reflow Soldering Profile

Product complies to MSL Level 3 acc. to JEDEC J-STD-020E

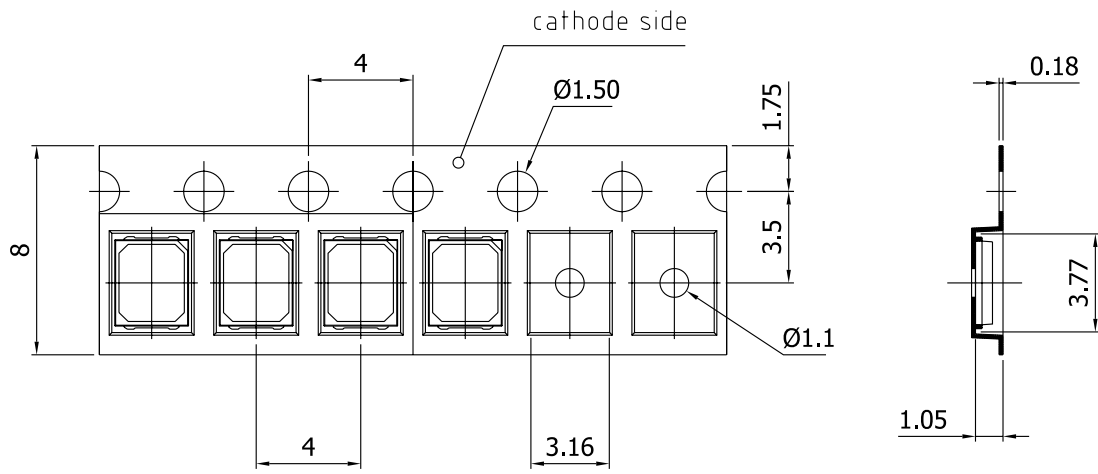


Profile Feature	Symbol	Pb-Free (SnAgCu) Assembly			Unit
		Minimum	Recommendation	Maximum	
Ramp-up rate to preheat ^{*)} 25 °C to 150 °C			2	3	K/s
Time t_s T_{Smin} to T_{Smax}	t_s	60	100	120	s
Ramp-up rate to peak ^{*)} T_{Smax} to T_p			2	3	K/s
Liquidus temperature	T_L		217		°C
Time above liquidus temperature	t_L		80	100	s
Peak temperature	T_p		245	260	°C
Time within 5 °C of the specified peak temperature $T_p - 5$ K	t_p	10	20	30	s
Ramp-down rate* T_p to 100 °C			3	6	K/s
Time 25 °C to T_p				480	s

All temperatures refer to the center of the package, measured on the top of the component

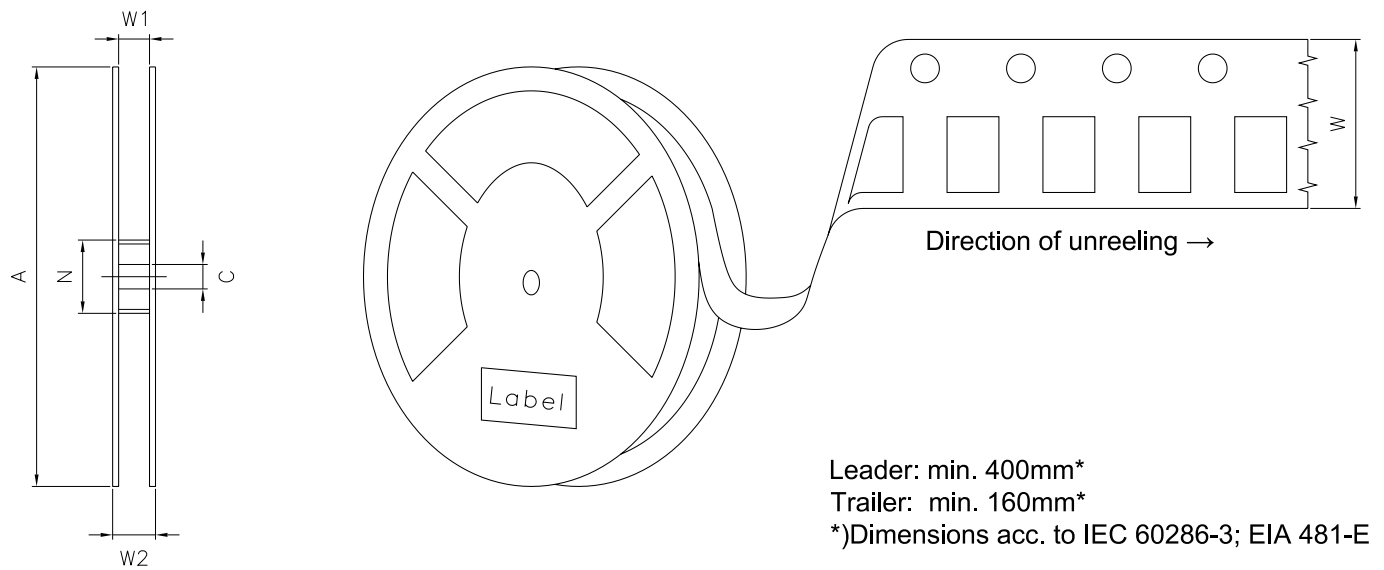
* slope calculation DT/Dt : Dt max. 5 s; fulfillment for the whole T-range

Taping ⁸⁾



C67062-A0204-B9-01

Tape and Reel ⁹⁾



Reel Dimensions

A	W	N_{\min}	W_1	$W_{2\max}$	Pieces per PU
330 mm	$8 + 0.3 / - 0.1$ mm	60 mm	$8.4 + 2$ mm	14.4 mm	10000

Barcode-Product-Label (BPL)

OSRAM Opto Semiconductors LX XXXX BIN1: XX-XX-X-XXX-X

RoHS Compliant

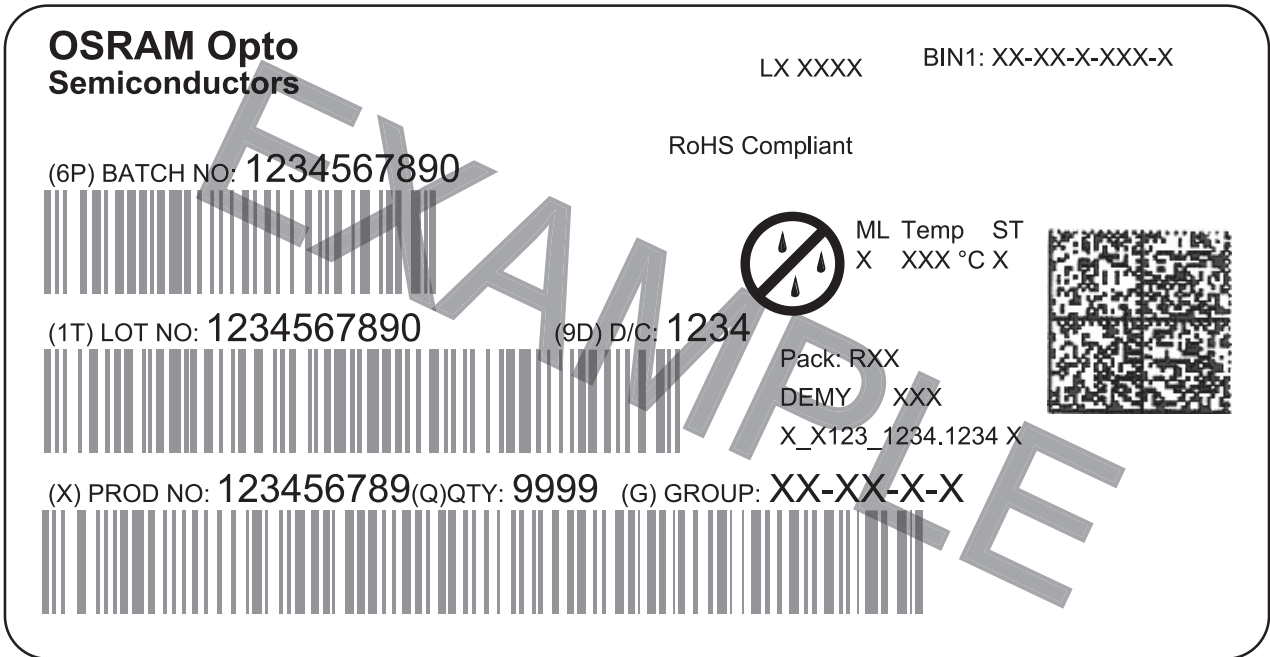
(6P) BATCH NO: 1234567890

(1T) LOT NO: 1234567890 (9D) D/C: 1234

(X) PROD NO: 123456789 (Q) QTY: 9999 (G) GROUP: XX-XX-X-X

ML Temp ST
X XXX °C X

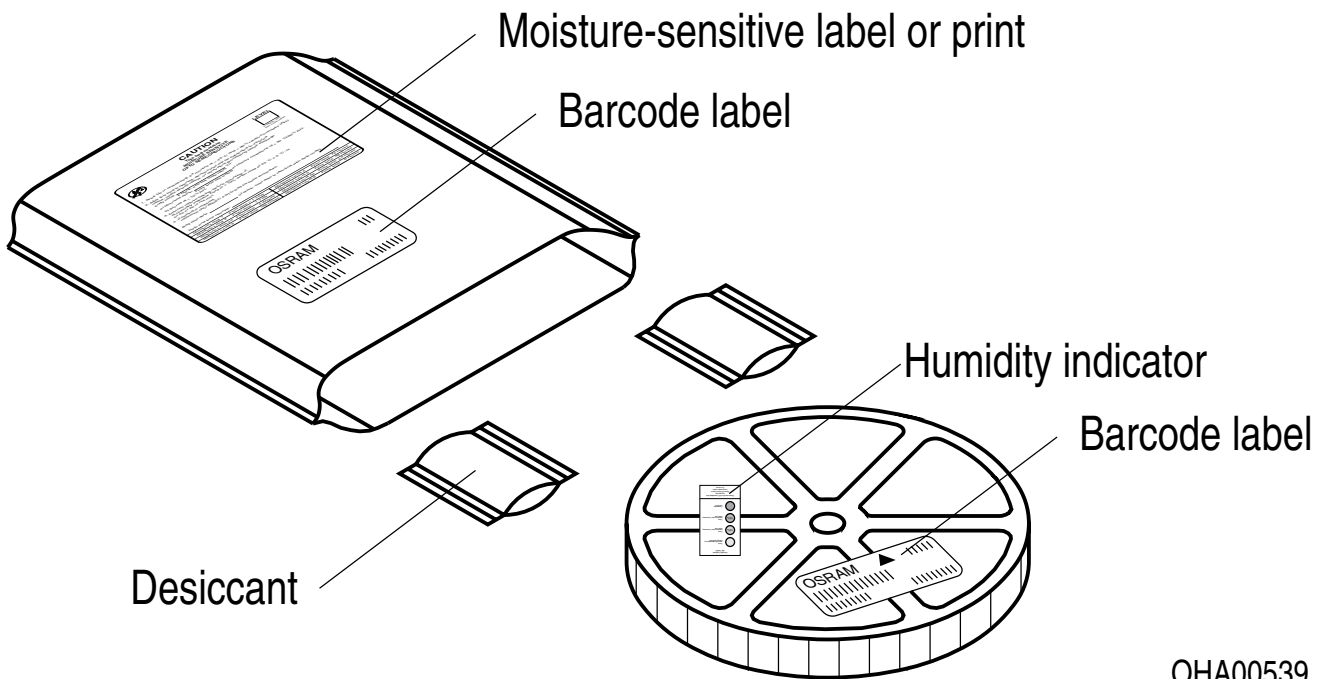
Pack: RXX
DEMY XXX
X_X123_1234.1234 X



The diagram shows a rectangular label with rounded corners. It contains the OSRAM logo and name, a part number (LX XXXX), and a bin number (BIN1: XX-XX-X-XXX-X). It features three main barcode sections: a top one for batch number (6P), a middle one for lot number (1T) and date code (9D), and a bottom one for product number (X) and quantity (Q). A RoHS Compliant logo is present. A moisture sensitivity symbol (a circle with a diagonal line and three drops) is shown next to the ML Temp ST field. A QR code is located on the right side. The label is overlaid with a large 'EXAMPLE' watermark.

OHA04563

Dry Packing Process and Materials ⁸⁾



OHA00539

Moisture-sensitive product is packed in a dry bag containing desiccant and a humidity card according JEDEC-STD-033.

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 **low risk (exposure time 100 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 the OSRAM OS 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

OSRAM OS components are not developed, constructed or tested for the application as safety relevant component or for the application in medical devices.

OSRAM OS products are not qualified at module and system level for such application.

In case buyer – or customer supplied by buyer – considers using OSRAM OS components in product safety devices/applications or medical devices/applications, buyer and/or customer has to inform the local sales partner of OSRAM OS immediately and OSRAM OS and buyer and /or customer will analyze and coordinate the customer-specific request between OSRAM OS 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 $\pm 0.05V$.
- 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 . And CRI-R9 are measured during a current pulse of typically 10 ms and the 4000K with a tolerance of ± 6 .
- 5) **Chromaticity coordinate groups:** Chromaticity coordinate groups are measured during a current pulse duration of typically 10ms with a tolerance of ± 0.005 .
- 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.
- 9) **Tape and Reel:** All dimensions and tolerances are specified acc. IEC 60286-3 and specified in mm.

Revision History

Version	Date	Change
1.4	2019-01-08	Tape and Reel
1.5	2019-04-10	Reel Dimensions
1.7	2019-10-31	Features Electro - Optical Characteristics (Diagrams) Characteristics Dimensional Drawing Schematic Transportation Box
1.8	2020-01-31	Dimensional Drawing
1.9	2021-01-14	Ordering Information
1.10	2021-08-26	Features Characteristics Electro - Optical Characteristics (Diagrams) Glossary

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