Data sheet

Part number :VXGW1152GDS-3C3J3-TR

2011/65/EU, (EU)2015/863
10 Substances regulation compliant

Lead-free solder heat resistant product

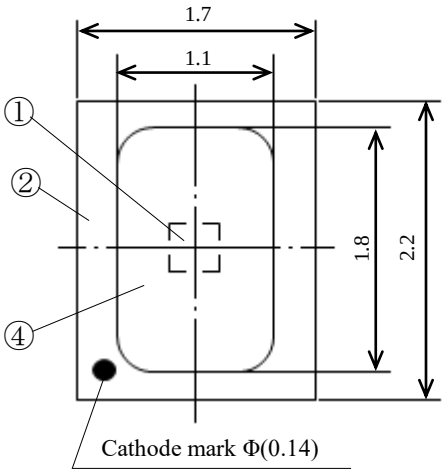
Package	SMD Top view Package, White color emitting LED Outer dimension 2.2 x 1.7 x 0.75mm (L x W x H)
Product features	・Luminous intensity 210mcd TYP. ・Moisture sensitive level : 2a ・Lead-free soldering compatible ・RoHS : 2011/65/EU, (EU)2015/863 compliant

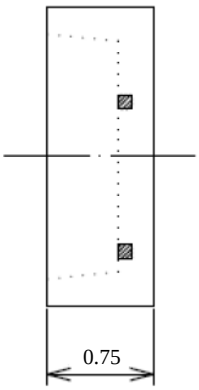
Recommended applications

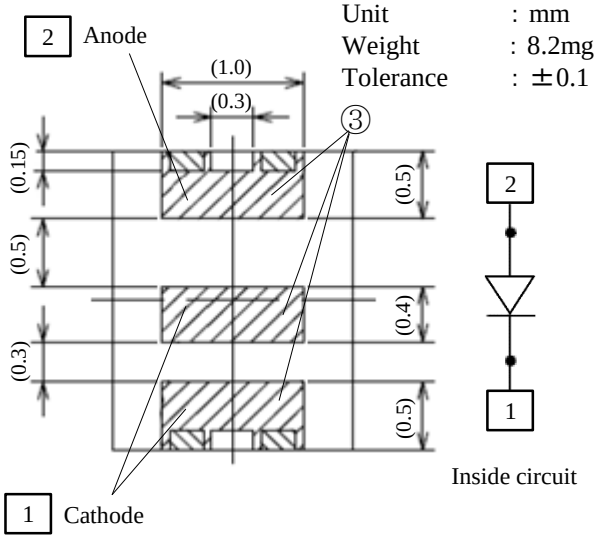
・Light source for automotive use, back light, various indicators, etc.

Outline dimensions

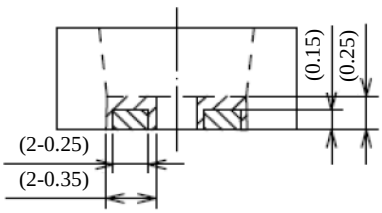
VXGW1152GDS-3C3J3-TR

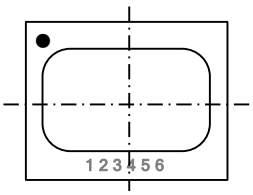






Unit : mm
Weight : 8.2mg
Tolerance : ±0.1



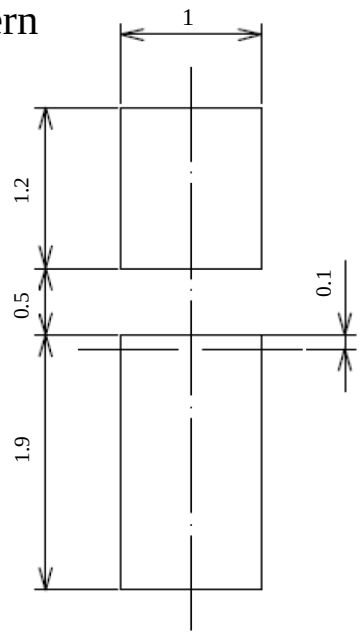


Marking for traceability

No.	Part name	Material	Qty.
①	LED die	InGaN	1
②	Lamp housing	White resin	1
③	Electrode	Pd/Au plating	Cathode: 2 Anode: 1
④	Encapsulant	Silicone resin	1

Recommended soldering pattern

Unit : mm



Specifications VXGW1152GDS-3C3J3-TR

【Product overview】

Die material	InGaN
Emitting color	White
Resin color【Emitting area】	Diffused pale yellow
Resin color【Lamp housing】	White

【Absolute maximum ratings】

Ta=25℃

Item	Symbol	Maximum ratings	Units	
Power dissipation	P_d	70	mW	
Forward current	I_F	20	mA	
Repetitive peak forward current【1ms, 1/10 duty】	I_{FRM}	100	mA	
I_F derate linearly【Ta=from 85℃】	$\triangle I_F$	0.57	mA/℃	
I_{FRM} derate linearly【Ta=from 85℃】	$\triangle I_{FRM}$	2.86	mA/℃	
Reverse voltage	V_R	5	V	
Operating temperature	T_{opr}	-40 to +100	℃	
Storage temperature	T_{stg}	-40 to +120	℃	
Junction temperature	T_j	120	℃	
Electrostatic discharge threshold【HBM】	ESD	1,000	V	Note1
Soldering temperature【Reflow soldering】	T_{sld}	260	℃	Note2

Note1 ESD testing method : JEITA ED-4701/302(304A)／IEC 60810 Human Body Model(HBM) 1.5kΩ,100pF

Note2 Please refer to page 9, soldering conditions.

【Thermal characteristics】

Ta=25℃

Item	Symbol	Typ.	Units	
Thermal resistance【Junction - Ambient temp.】	$R_{th(j-a)}$	220	℃/W	Note3
Thermal resistance【Junction - Solder point】	$R_{th(j-s)}$	70	℃/W	

Note3 $R_{th(j-a)}$ measurement conditions / Substrate : FR4 (t=1.6mm)
Pattern size : 16mm^2

Specifications VXGW1152GDS-3C3J3-TR

【Electro-optical characteristics】

Ta=25℃

Item	Symbol	Conditions	Min.	Typ.	Max.	Units	
Forward voltage	V_F	I_F = 10mA	2.6	3.1	3.5	V	Note4
Luminous intensity	I_V	I_F = 10mA	150	210	270	mcd	Note5
Luminous flux	φ_V	I_F = 10mA	-	0.69	-	lm	
Chromaticity coordinates	x	I_F = 10mA	-	0.293	-		Note6,7
	y		-	0.281	-		
Half intensity angle	△θx	I_F = 10mA	-	115	-	deg.	Note8
	△θy		-	115	-		

Note4 Tolerance: ±0.1V

Note5,6 Please refer to each sorting chart.

Note7 Chromaticity coordinates ; x and y according to CIE1931

Note8 Viewing Angle at 50% I_V, $\Delta\theta_X$; Housing long side axis, $\Delta\theta_Y$; Housing short side axis

【Sorting chart for luminous intensity】

LEDs shall be sorted out into the following chart and each rank parts shall be packed separately when shipping.

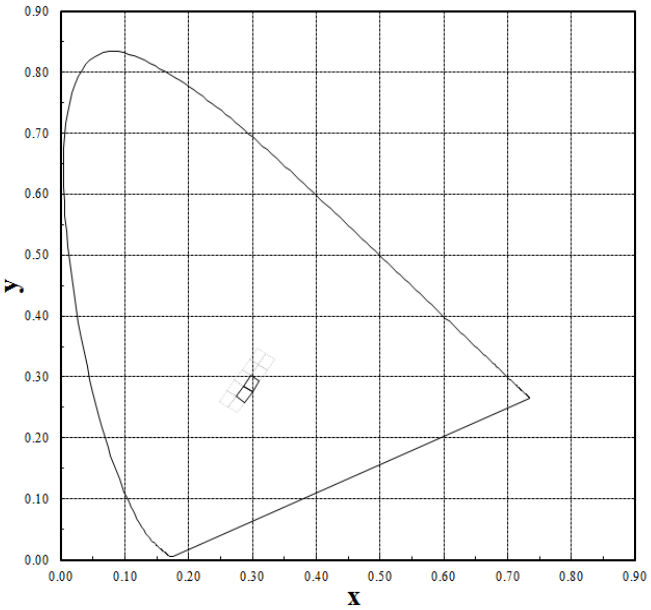
Rank	Luminous intensity I_V (mcd)		Conditions
	Min.	Max.	
C3	150	180	I_F = 10mA Ta = 25℃
C4	180	220	
C5	220	270	

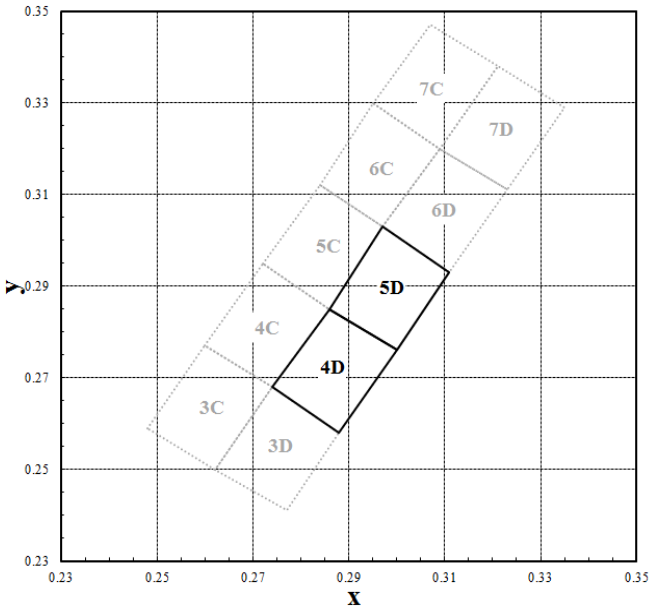
Note Luminous intensity tolerance: ±10%

Specifications VXGW1152GDS-3C3J3-TR

【Sorting chart for chromaticity coordinates】

LEDs shall be sorted out into the following chart and each rank parts shall be packed separately when shipping.





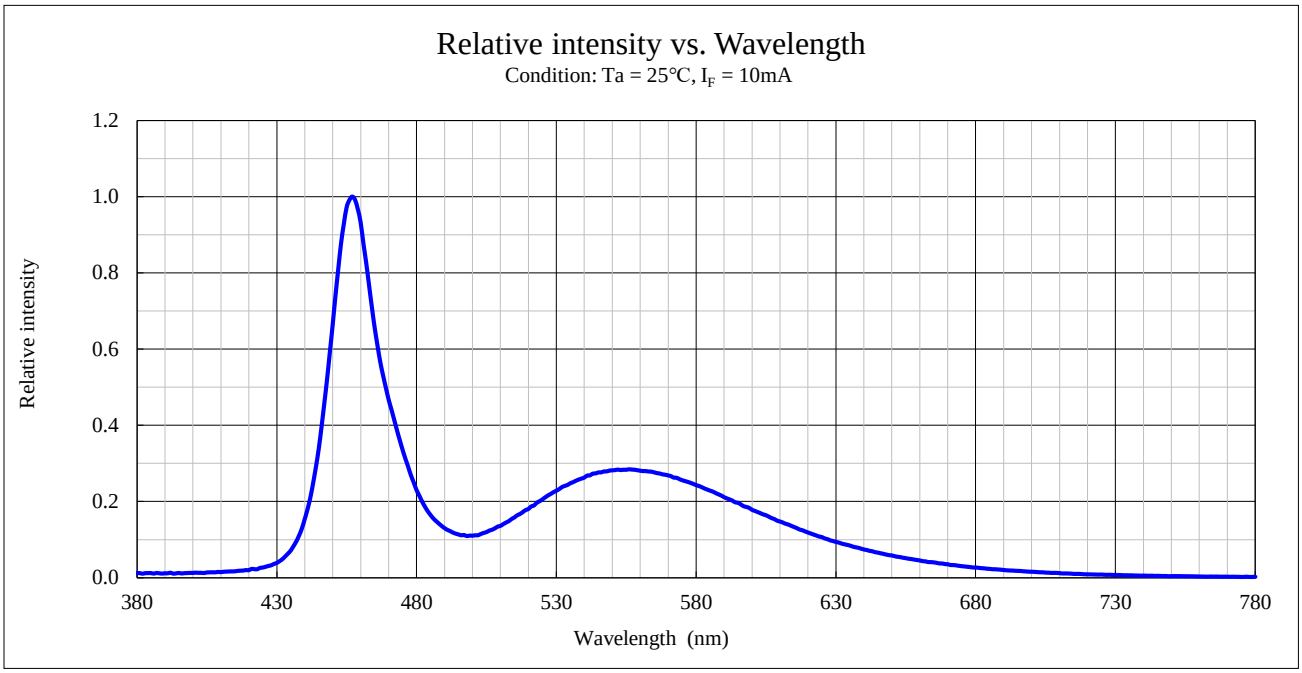
(I_F=10mA, Ta=25℃)

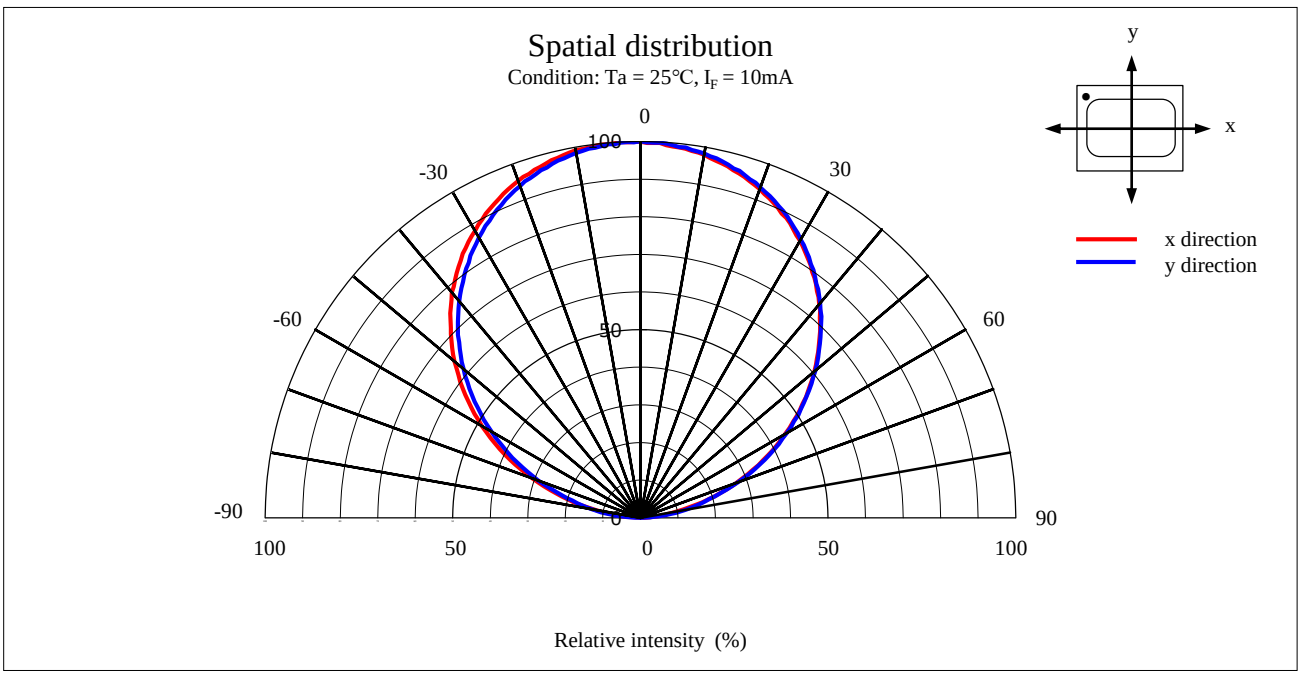
	Left down		Left upper		Right upper		Right down	
Rank	x	y	x	y	x	y	x	y
4D	0.274	0.268	0.286	0.285	0.300	0.276	0.288	0.258
5D	0.286	0.285	0.297	0.303	0.311	0.293	0.300	0.276

Note Tolerance: ±0.01

Technical Data

VXGW1152GDS-3C3J3-TR



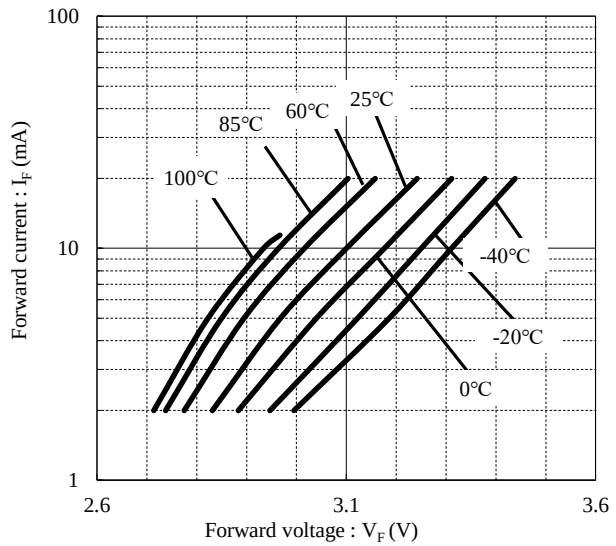


Technical Data

VXGW1152GDS-3C3J3-TR

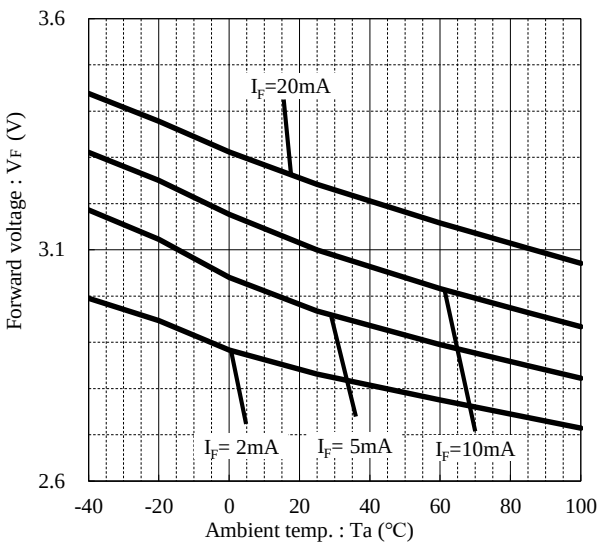
Forward voltage vs. Forward current

Condition: Ta = -40 to 100℃



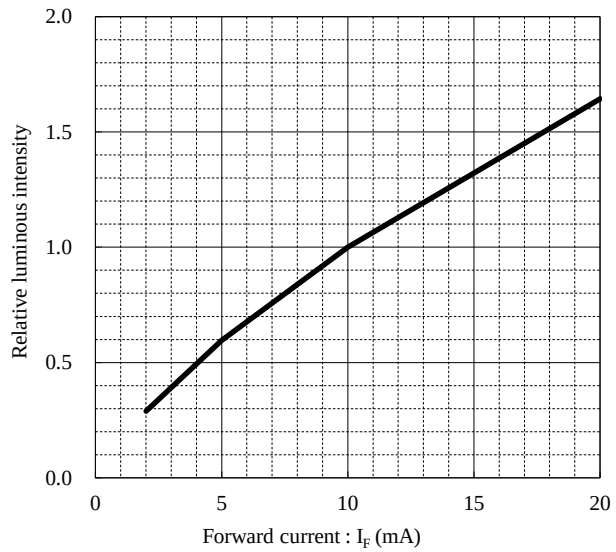
Ambient temp. vs. Forward voltage

Condition : I_F=2 to 20mA



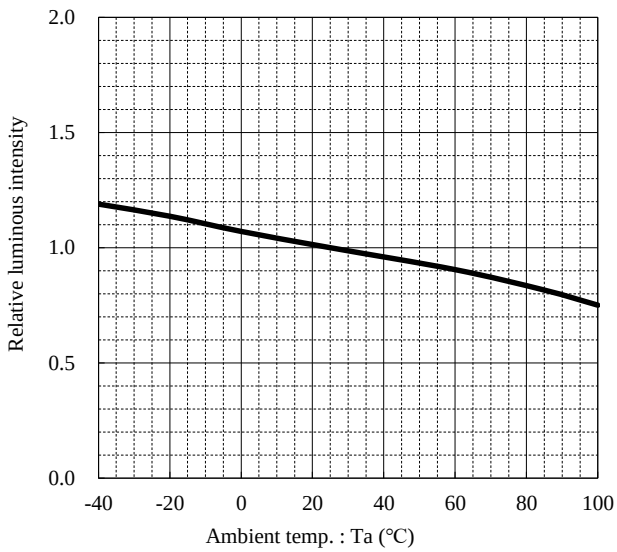
Forward current vs. Relative luminous intensity

Condition : Ta = 25℃



Ambient temp. vs. Relative luminous intensity

Condition : I_F=10mA

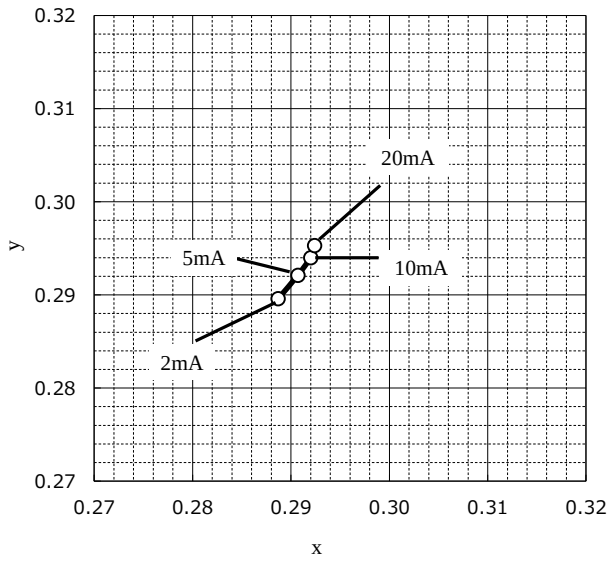


Technical Data

VXGW1152GDS-3C3J3-TR

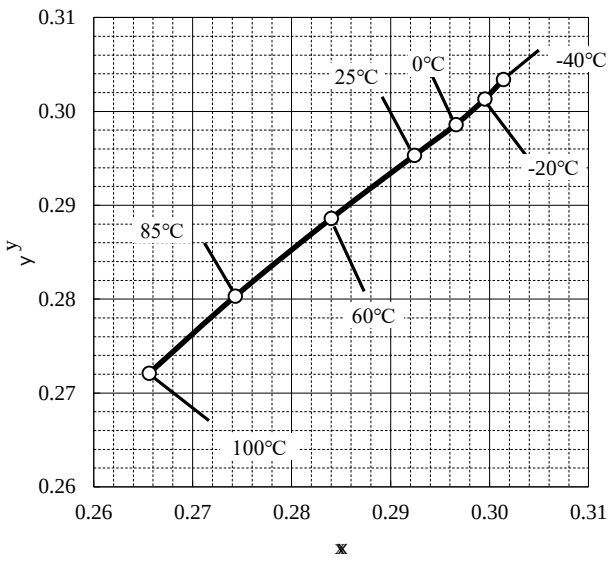
Chromaticity vs. Forward current

Condition: Ta = 25℃



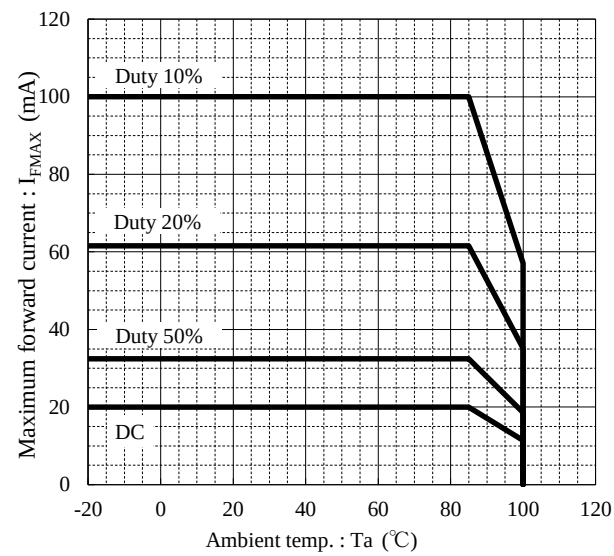
Chromaticity vs. Ambient temp.

Condition : I_F=10mA

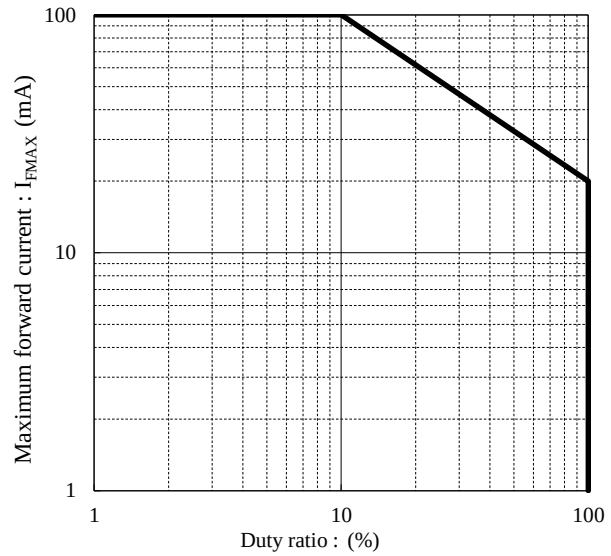


Max. forward current vs. Ambient temp.

Condition : Repetition frequency ≧ 100Hz



Max. forward current vs. Duty ratio



Soldering condition

VXGW1152GDS-3C3J3-TR

【Soldering Precaution】

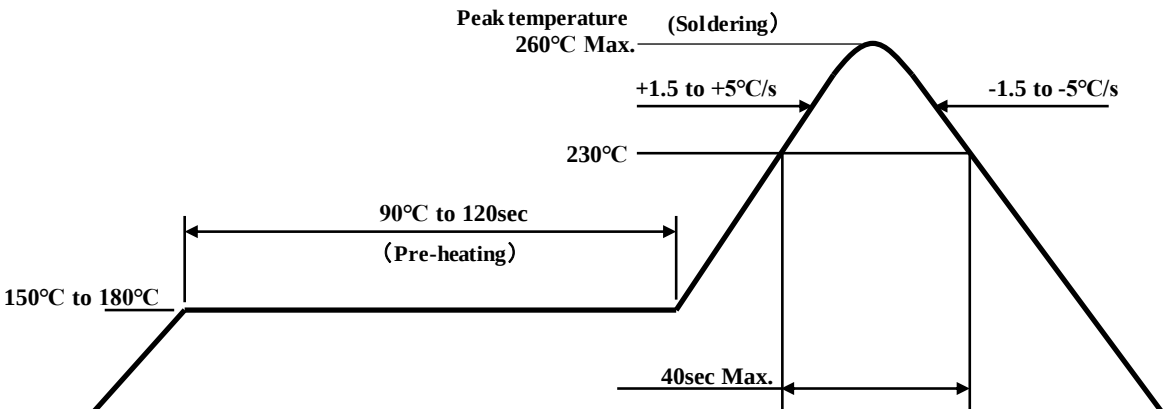
(acc.to JEITA-4701/301A(301D))

1. Heat stress during soldering will influence the reliability of LEDs, however that effect will vary on heating method. Also, if components of varying shape are soldered together, it is recommended to set the soldering pad temperature according to the component most vulnerable to heat (e.g., surface mount LED).

2. LED parts including the resin are not stable immediately after soldering (when they are not at room temperature), any mechanical stress may cause damage to the product. Please avoid such stress after soldering, especially stacking of the boards which may cause the boards to warp and any other types of friction with hard materials.

3. Recommended temperature profile for the reflow soldering is listed as the temperature of the resin surface. Temperature distribution varies on heating method, PCB material, other components in the assembly, and mounting density .
   Please do not repeat the heating process in reflow process more than 2 times.

【Recommended reflow soldering condition】



Note 1 Temperature profile for the reflow should be set to the surface temperature of resin which is on the top of LED. This should be the maximum temperature for soldering. Lowering the heating temperature and decreasing heating time is very effective in achieving higher reliability.

Note 2 The reflow soldering process should be done up to 2 times Max. When second process is performed, interval between first and second process should be as short as possible to prevent absorption of moisture to resin of LED. The second soldering process should not be done until LEDs have returned to room temperature (by nature-cooling) after first soldering process.

Soldering condition

VXGW1152GDS-3C3J3-TR

4. If soldering manually, the peak temperature changes according to the size of land and the shape of soldering iron tip. Therefore please confirm there is no problem before usage. Also, Stanley recommends using a soldering iron equipped with temperature control and the peak temperature to be lowered.
   During the actual soldering process, make sure that the soldering iron never touches the LED itself, and avoid the LED's electrode temperature reaching above the temperature of the solder pad.
   All repairs must be performed only once in the same spot, and please avoid reusing components.

5. In soldering process, immediately after iron tip is cleaned, please make sure that the soldering iron reaches the appropriate temperature, then use it. Also, please avoid applying any types of pressure to the soldered components before the solder is cooling and hardening, as it may deteriorate solder performance and solder quality.

【Recommended manual soldering condition】

Temperature of iron tip	350℃ max.
Soldering duration, time	3sec. max., 1 time

6. When using adhesive material for tentative fixatives, thermosetting resin or Ultraviolet radiation(UV) setting resin with heat shall be recommended.
   The curing condition, Temperature:150℃ max. / Time:120sec.max.

7. Flow soldering (dip soldering) is not guaranteed for this product.

8. Please confirm in advance there is no problem by assessment on your side if cleaning process is necessary.
   We can not accept any quality issues caused by the cleaning process.
   As this product uses the low hardness silicone resin for the lens, please avoid cleaning to give pressure on the surface of the resin.
   Please make sure ultrasonic cleaning is not recommended for this product as well.
   We will recommend isopropyl alcohol as a solvent used for cleaning.
   Some chemicals, including Freon substitute detergent could corrode the lens or the casing surface, which cause discoloration, cloud, crack and so on.
   Please review the reference chart below for cleaning. If water is used to clean (including the final cleaning process), please use pure water (not tap water), and completely dry the component before using.

Cleaning agents	Recommended / Not recommended
Isopropyl Alcohol	✓ Recommended
Trichloroethylene	x Not recommended
Chlorothene	x Not recommended
Acetone	x Not recommended
Thinner	x Not recommended

Handling precautions VXGW1152GDS-3C3J3-TR

【For Electric Static Discharge (ESD)】

InGaN die LEDs are sensitive to voltage surges generated by On/Off status change and friction with synthetic materials, which may cause severe damage to the die or undermine its reliability.
Damaged products may experience conditions such as extremely high reverse voltage or decrease of forward rise voltage deteriorating their optical characteristic.
Stanley InGaN products are packed with anti-static components.
However, the following precautions must be taken into account upon product shipment.

1. Electrification / static electricity protection

In order to avoid product (die) damage from static electricity caused by electrified operator and other materials electrified friction coming in contact with the product, Stanley recommends taking the following precautions.

① Do not place electrified non-conductive materials near the LED product.
Avoid LED products from coming into contact with metallic materials.(Should the metallic material be electrified , the sudden surge voltage will most likely damage the product.)

② Avoid a working process which may cause the LED product to rub against other materials.

③ Install ground wires for any equipment, where they can be installed, with measures to avoid static electricity surges.

④ Prepare a ESD protective area by placing a Conductive Mattress (1MΩ MAX.) and Ionizer to remove any static electricity.

⑤ Operators should wear a protective wrist-strap.

⑥ Operators should wear conductive work-clothes and shoes.

⑦ To handle the products directly, Stanley recommends the use of ceramic, and not metallic, tweezers.

2. Working environment

① Dry environment is more likely to cause static electricity. Although a dry environment is ideal for storage state of LED products, Stanley recommends an environment with approximately 50% humidity after the soldering process.

② Recommended static electricity level in the working environment is less than 150V, which is the same value as Integrated Circuits (which are sensitive to static electricity).

Handling precautions VXGW1152GDS-3C3J3-TR

【Other precautions】

1. The products are designed to achieve higher performance reliability, however, they can be influenced by usage conditions.

2. Absolute maximum ratings are set to prevent LED products from breaking due to extreme stress (temperature, current, voltage, etc.). These ratings must never be overrun even for a moment.

3. To achieve the highest performance reliability, it is necessary to take into account, factors such as forward voltage adjusted to the usage temperature condition, derating of the power consumption, and other variable factors.

4. Please insert straight protective resistors into the circuit in order to stabilize LED operation and to prevent the device from overheating.

5. Please avoid to stick foreign materials because molding resin in the products has adhesiveness.
   And please don't touch lens portion , so it cause the wire open circuit etc. when the stress hangs to the lens portion.

6. To handle with tweezers, please avoid excessive stress to this part. Excessive stress may cause non-lighting due to deformation, crack and breaking. Stanley recommends the use of ceramic tweezers, and not sharp one.

7. Please note external stress such as dropping and hitting may cause non-lighting due to deformation, crack and breaking.

8. Stanley does not recommend supersonic wave welding as it cause resonance with sealing resin and may cause breaking of conductive wire.
   Please use after affirming beforehand there is no problem.

9. The solder crack by the heat stress might be generated when the LED is soldered with the metal plate and go enough in a prior confirmation, please.

10. Please note piling PCBs may stress LEDs. It may cause non-lighting due to deformation, crack and breaking.

11. This part does not have proof for water, humidity and salt damage.
    Please use after affirming beforehand there is no problem if using on above conditions.

12. Please keep in desiccator regardless of before or after mounting not to be affected by corrosive gas when keeping products.
    Also please make sure if there is any gas which occur in surrounding area or enter from outside when using products.

13. Please check the actual performance in the assembly because the Specification Sheets are described for single LED.

14. Please refrain from looking directly at the light source of LED at high output, as it may harm your vision.

15. The products are designed to perform without failure in the recommended usage conditions.
    However, please take the necessary precautions to prevent fire, injury, and other damages from these unexpected failures.

16. The products are manufactured to be used for ordinary electronic equipment. Please contact our sales staff in advance when exceptional quality and reliability are required, when the failure or malfunction of the products might directly jeopardize life or health (such as for airplanes, aerospace, transport equipment, medical applications, nuclear reactor control systems and so on).

17. The formal specification sheets should be exchanged and signed by both parties.

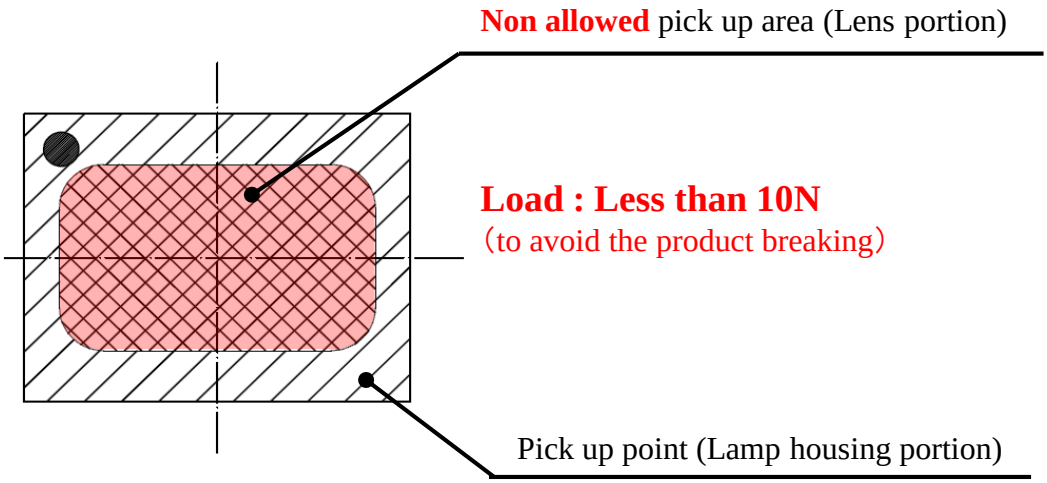
Handling precautions VXGW1152GDS-3C3J3-TR

【Handling precautions for product mounting】

＜Recommendation＞

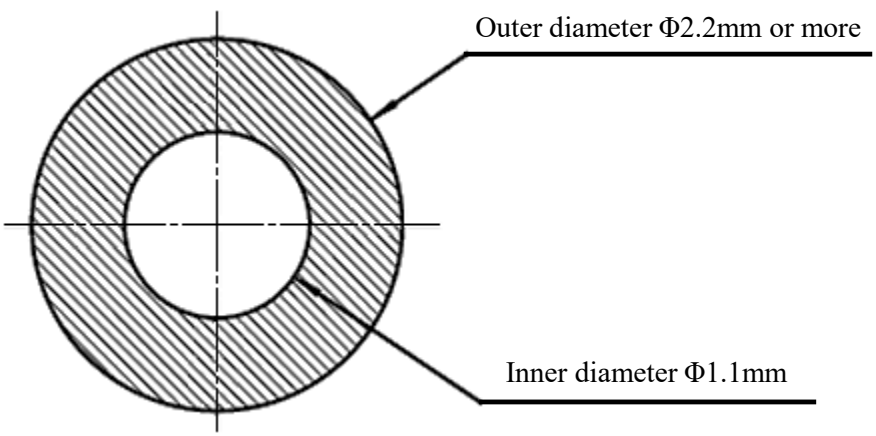
1. Picking up point with nozzle : Lamp housing of the product (▨ area : Shown below)

The pick up point is lamp housing only because the silicone resin used for the lens is soft.
(If the nozzle makes contact with the lens, the products might be destroyed)



Please adjust the load, the pick up point, the nozzle diameter and etc. before mounting because the over load can cause the breakage of the lamp housing.

2. Recommended nozzle shape

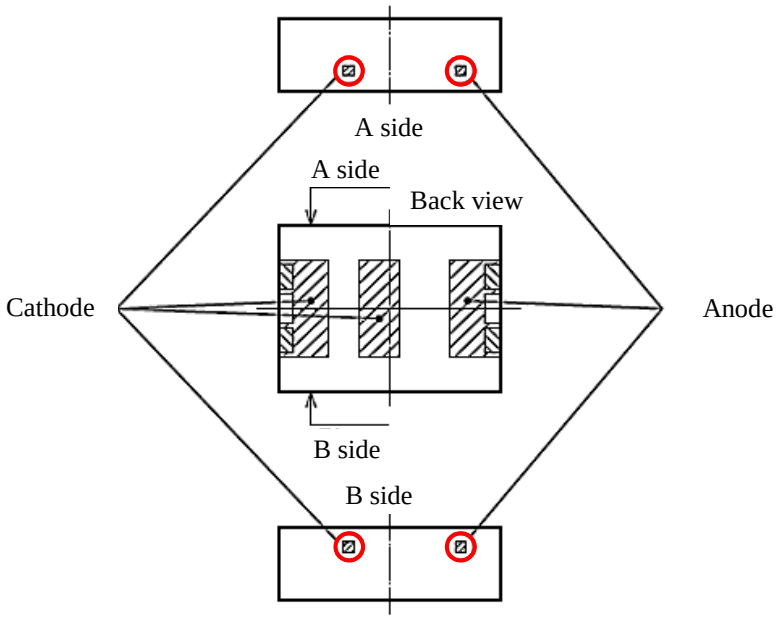


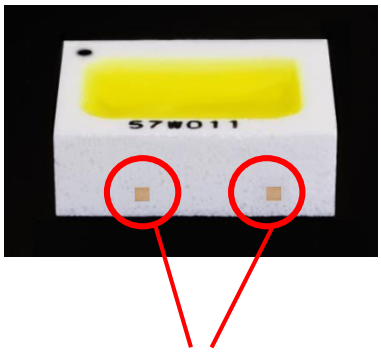
Handling precautions VXGW1152GDS-3C3J3-TR

【Other precautions for product mounting】

1. Regarding exposed metal

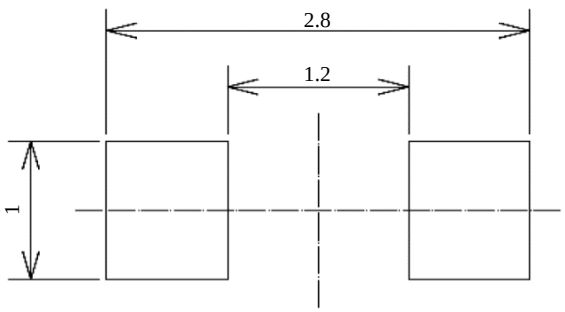
This LED has exposed metal on the non soldering area. Please avoid touching electro conductive material on this exposed metal as it may connect with other electrode and short out.



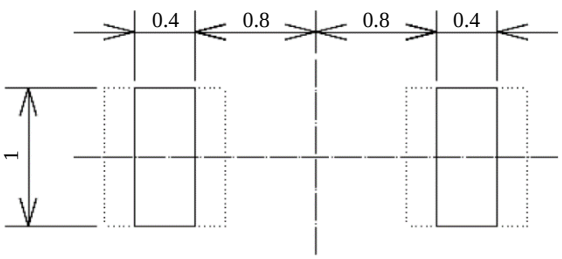


2. Terminal mounting section

There are 3 terminals on the back.
It becomes 3 terminals mounting for the soldering,
and mounting on following symmetry pad is also possible.
Provided that, please confirm there is no problem in your company before usage.



Symmetrical pad



Recommended metal mask for symmetrical pads

Packaging specifications

VXGW1152GDS-3C3J3-TR

This product is baked (moisture removal) before packaging, and is shipped in moisture-proof packaging (as shown below) to minimize moisture absorption during shipping. However, in regard to storing the products, the use of dry-box under the following conditions is recommended. Moisture-proof bag as the packaging is made of anti-static material but packaging box is not.

【Recommended storage condition / products warranty period 】

Temperature	+5 to 30℃
Humidity	Under 70%

In the case of the package unopened , please use within 6 months under【Recommended storage condition】.
Please avoid rapid transition from low temp. condition to high temp. condition
and storage in corroding and dusty environment.

【Time elapsed after package opening】

The package should not be opened until immediately prior to its use, and please keep the time frame between package opening and soldering which is【maximum 672h】.
If the device needs to be soldered twice, both soldering operations must be completed within the 672h.

If any components should remain after their use, please reseal the package and store them under the conditions described in the【 Recommended storage condition 】.

This product must be required to perform baking process (moisture removal) for
at least 48h and not exceed for 72h, at 60+ / -5 degrees Celsius if following conditions apply.

1. In the case of color of indicators (those are in the package of desiccant) change or lose its blue color.
2. In the case of time is passed for 672h after the package is opened once.

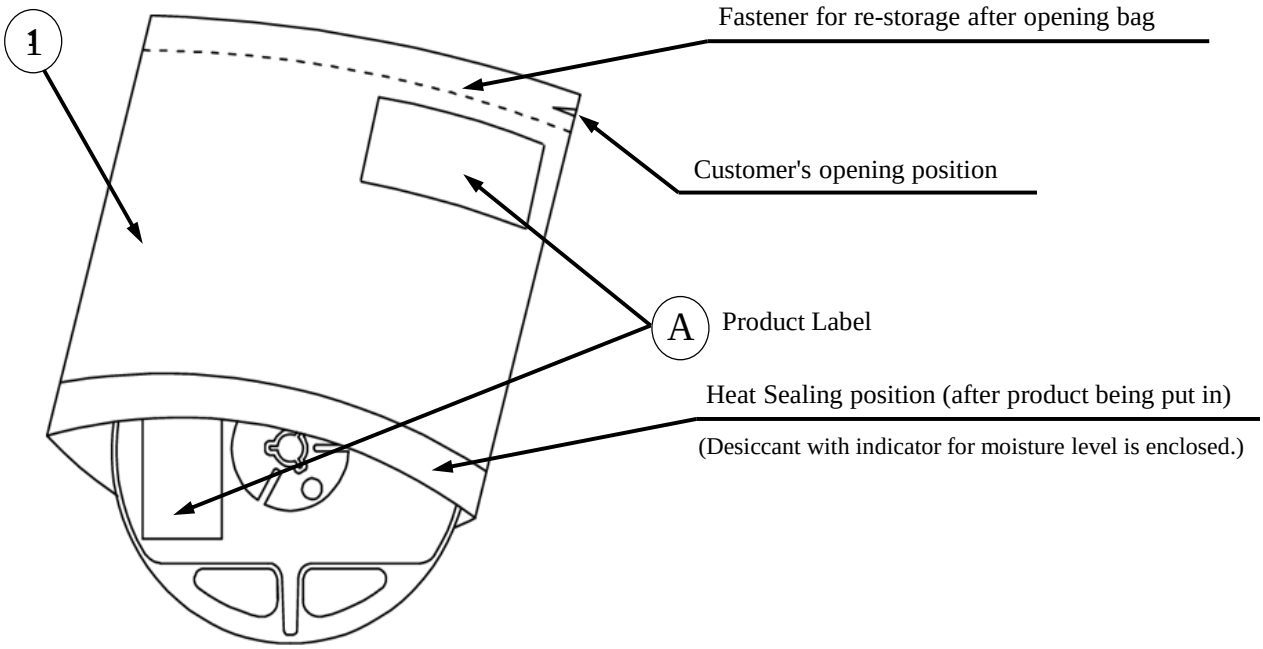
Baking process should be performed after putting out from package.

Baking may be performed in the tape-reel form , however if it is performed with the reel stacked over one another, it may cause deformation of the reels and taping materials, which may cause problems during production.
Please make sure that the product has cooled to normal temperature after performing the baking process.
Provided that, baking process shall be 2 times max.

Packaging specifications

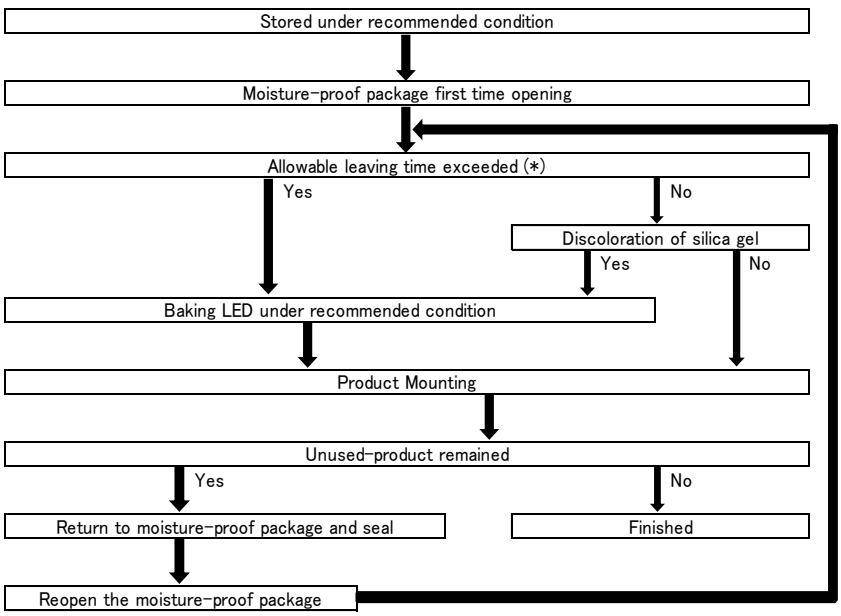
VXGW1152GDS-3C3J3-TR

【Moisture-proof packaging specification】



No.	Part name	Material	Remarks
①	Moisture-proof bag with aluminum layer	PET+Al+PE	with ESD protection

【Flow chart-package opening to mounting】



Allowable leaving time means the maximum allowable leaving time after opening package, which depends on each LED type.
The allowable leaving time should be calculated form the first opening of package to the time when soldering process is finished.
When judging if the allowable leaving time has exceeded or not, please subtract the soldering time. The allowable leaving time after reopening should be calculated form the first opening of package, or from the time when baking process is finished.

Packaging specifications

VXGW1152GDS-3C3J3-TR

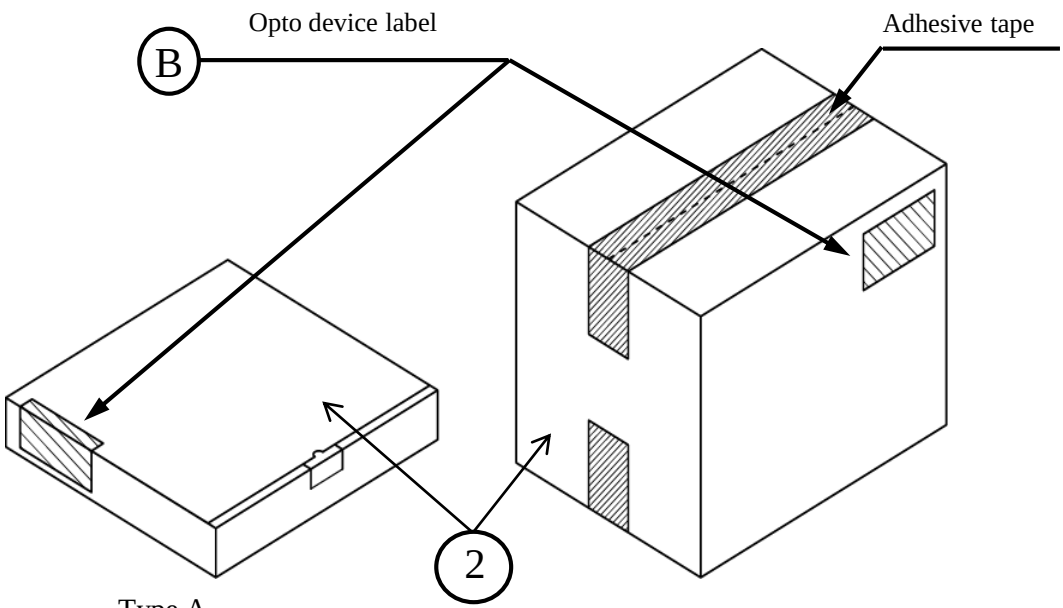
【 Packing box 】

(RoHS / ELV compliant)

Box type	Outline dimension L × W × H (mm)	Capacity of the box
Type A	280 × 265 × 45	3 reels
Type B	310 × 235 × 265	15 reels
Type C	440 × 310 × 265	30 reels
Type D	305 × 270 × 65	3 reels
Type E	370 × 280 × 270	30 reels
Type F	530 × 380 × 270	60 reels

The above measurements are reference values.

The box is selected out of the above table by shipping quantity.



Type A

Material / box : Cardboard C5BF

Type B, C

Material / box : Cardboard K5AF

Partition : Cardboard K5BF

Type D

Material / box : Cardboard C5WF

Type E, F

Material / box : Cardboard BC-KA125/3CA125/KA125

No.	Part name	Material	Remarks
②	Packing box	Corrugated Cardboard	without ESD protection

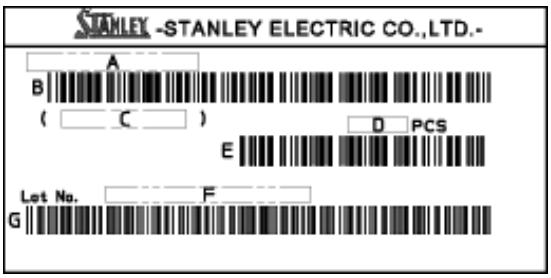
Packaging specifications

VXGW1152GDS-3C3J3-TR

【Label specification】

(acc.to JIS-X0503(Code-39))

A Product label



A. Parts number

B. Bar-code for parts number

C. Parts code (In-house identification code for each parts number)

D. Packed parts quantity

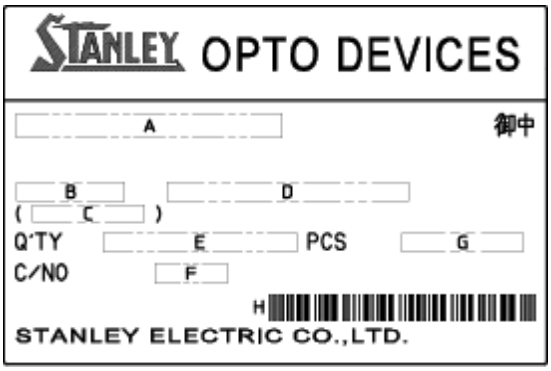
E. Bar-Code for packed parts quantity

F. Lot number & rank

(Please refer to lot number notational system for details)

G. Bar-code for lot number & rank

B Opto device label



A. Customer name

B. Parts type

C. Parts code

D. Parts number

E. Packed parts quantity

F. Carton number

G. Shipping date

H. Bar-code for In-house identification number

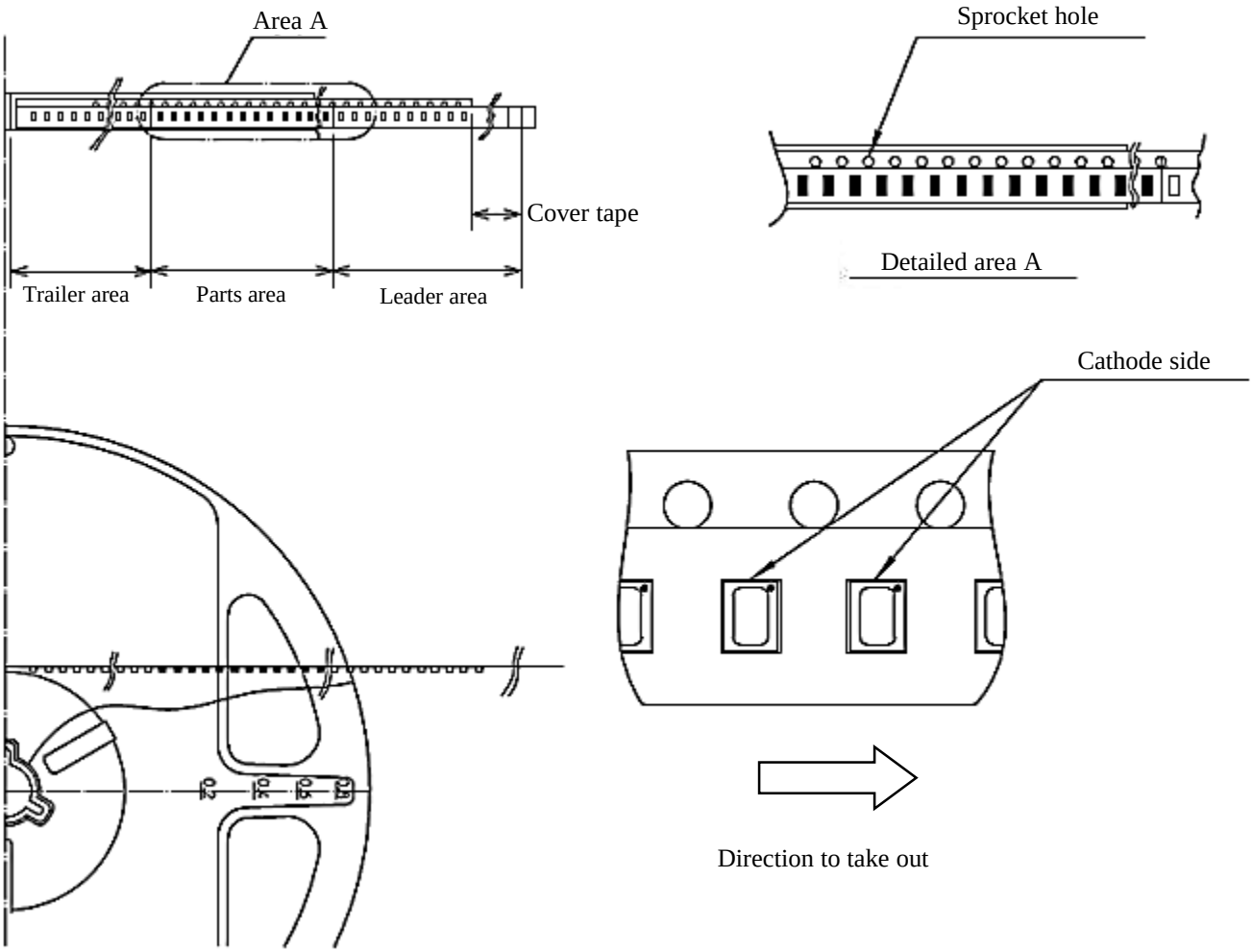
<Remarks> Bar-code font : acc.to Code-39(JIS-X0503)

Taping and reel specifications

VXGW1152GDS-3C3J3-TR

(acc.to JIS-C0806-03)

【Appearance】



Note

"-TR" means Cathode Side of LEDs; should be placed on the sprocket-hole side.

Items		Specifications	Remarks
Leader area	Cover-tape	Cover-tape shall be longer than **300mm** without carrier-tape	The end of cover-tape shall be held with adhesive tape.
	Carrier-tape	Empty pocket shall be more than **25 pieces**.	Please refer to the above figure for Taping & reel orientation .
Trailer area		Empty pocket shall be more than **40 pieces**.	The end of taping shall be inserted into a slit of the hub.

Taping and reel specifications

VXGW1152GDS-3C3J3-TR

【 Qty. per reel】

3,000parts/reel
Minimum Qty. per reel might be 500 parts when getting less than 3,000 parts.
In such case, parts of 500-unit-qty. shall be packed in a reel and the qty. shall be identified on the label

【Mechanical strength】

Cover-tape adhesive strength shall be 0.1～1.0N (An angle between carrier-tape and cover-tape shall be170 deg.).
Both tapes shall be so sealed that the contained parts will not come out from the tape when it is bent at a radius of 15mm.

【 Others】

Reversed-orientation, Up-side down placing, side placing and out of spec. parts mix shall not be held.
Empty pocket per reel shall be defined as follows.

Qty./reel	Max. qty. of empty pocket	Remaks
500	1	-
1,000	1	-
1,500	1	-
2,000	2	No continuance
2,500	2	No continuance
3,000	3	No continuance

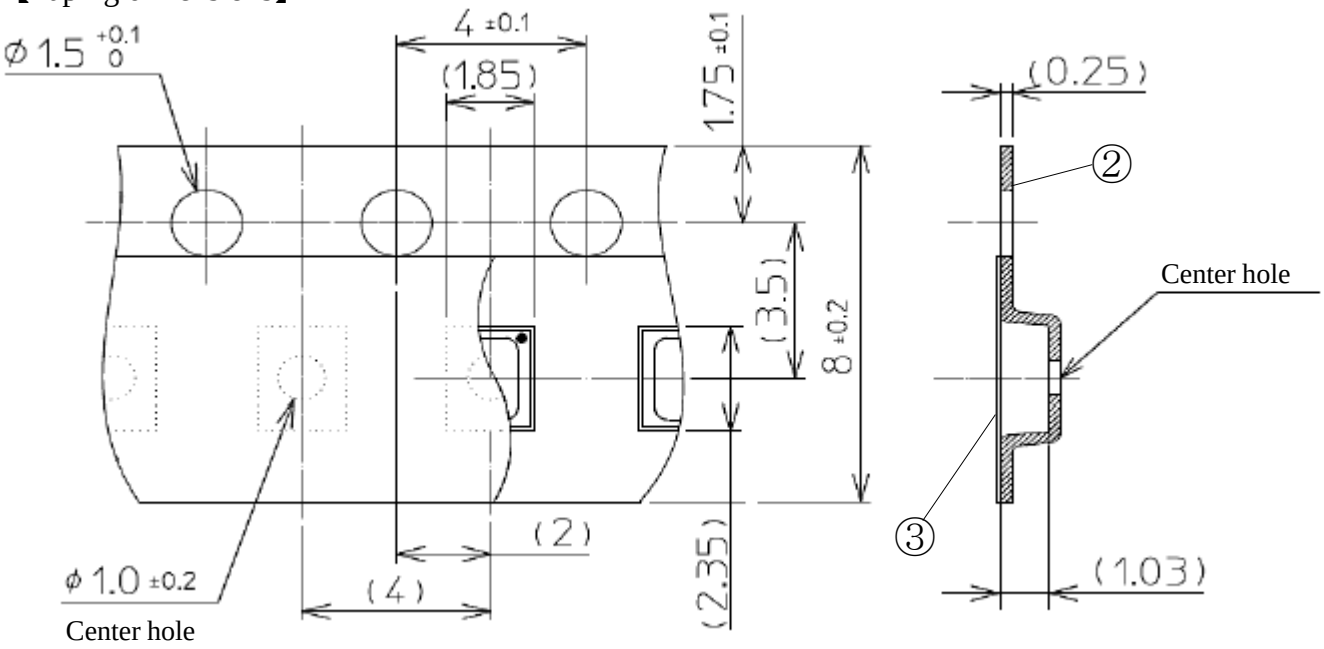
Taping and reel specifications

(acc.to JIS-C0806-03)

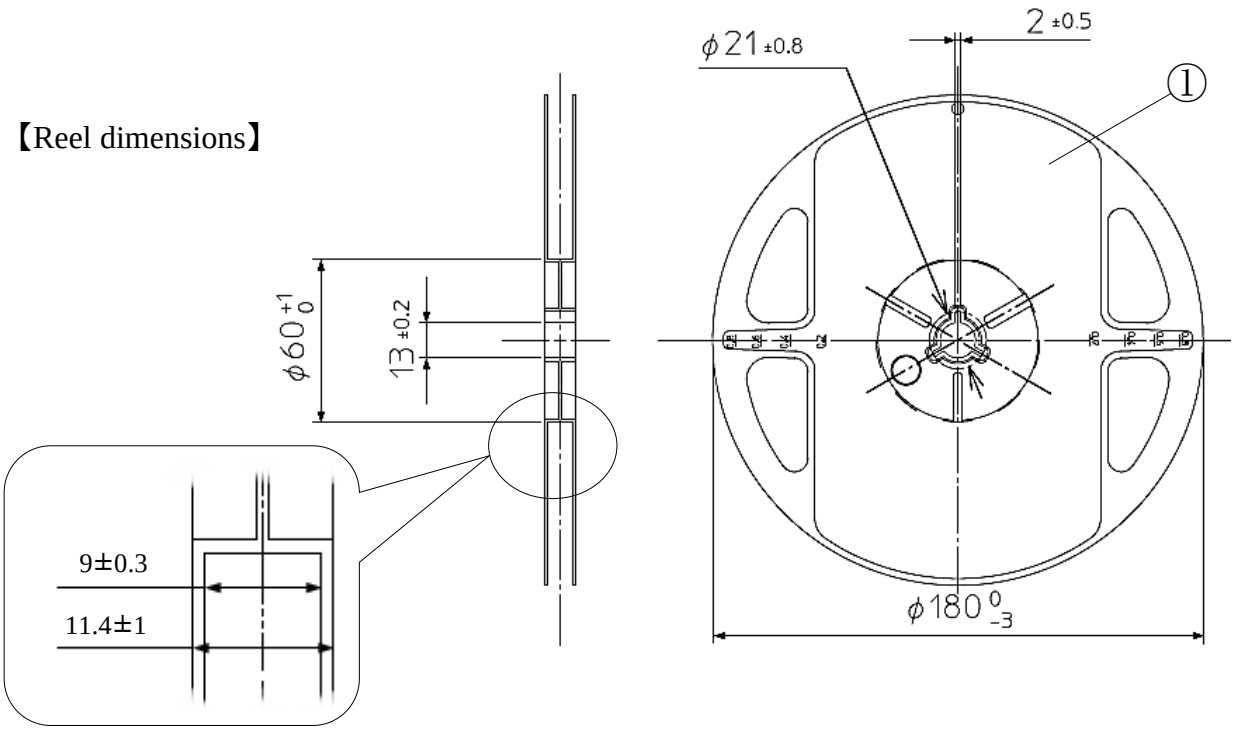
VXGW1152GDS-3C3J3-TR

Unit: mm

【Taping dimensions】

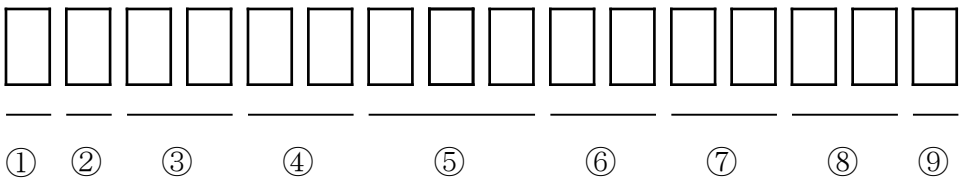


【Reel dimensions】



No.	Part name	Remarks
①	Carrier-reel	with ESD protection
②	Carrier-tape	with ESD protection
③	Cover-tape	with ESD protection

Lot number notational system VXGW1152GDS-3C3J3-TR



① - 1digit : Production location (mark identify alphabet)

② - 1digit : Production year (The last digit of production year 2025→5, 2026→6, 2027→7, 2028→8 ･･･)

③ - 2digits : Production month (Jan. to Sep. , should be 01,02,03 ･･･)

④ - 2digits : Production date

⑤ - 3digits : Serial number

⑥ - 2digits : Tape and reel following number

⑦ - 2digits : Total power rank.

(If total power rank is 1 digit, "-" shall be dashed on the place for the second digit.

If there is no identified rank, "- -" is used to indicate.)

⑧ - 2digits : Color / chromaticity rank

(If color / chromaticity rank is 1 digit, "-" shall be dashed on the place for the second digit.

If there is no identified intensity rank, "- -" is used to indicate.)

⑨ - 1digit : V_F rank (If rank is not defined, "-" is described.)

Compliance with RoHS / ELV

VXGW1152GDS-3C3J3-TR

This product is in compliance with RoHS / ELV.
Prohibition substance and it's criteria value of RoHS / ELV are as follows.

- RoHS instruction … Refer to following 1 to 10.
- ELV instruction … Refer to following 1 to 4.

2011/65/EU, (EU)2015/863

No.	Substance group name	Maximum permissible concentration value
1	Lead and its compounds	1,000ppm (0.1%)
2	Cadmium and its compounds	100ppm (0.01%)
3	Mercury and its compounds	1,000ppm (0.1%)
4	Hexavalent chromium compounds	1,000ppm (0.1%)
5	PBB : Polybrominated Biphenyls	1,000ppm (0.1%)
6	PBDE : Polybrominated Biphenyl Ethers	1,000ppm (0.1%)
7	DEHP : Bis (2-ethylhexyl) phthalate	1,000ppm (0.1%)
8	BBP : Butyl benzyl phthalate	1,000ppm (0.1%)
9	DBP : Dibutyl phthalate	1,000ppm (0.1%)
10	DIBP : Diisobutyl phthalate	1,000ppm (0.1%)

Reliability Testing Result VXGW1152GDS-3C3J3-TR

1. Reliability testing result

Test item	Standard	Test condition	Duration	Failure
Room temperature operating life	JEITA ED-4912A	Ta=25℃ I_F=20mA	1,000h	0 / 20
High temperature operating life	JEITA ED-4701 / 100A(101A)	Ta=85℃ I_F=20mA	1,000h	0 / 20
Low temperature operating life	JIS C60068-2-1	Ta=−40℃ I_F=20mA	1,000h	0 / 20
High wet – High temperature operating life	JEITA ED-4701 / 100A(102A)	Ta=60℃ Rh=90% I_F=20mA	1,000h	0 / 20
High temperature storage life	JEITA ED-4701 / 200A(201A)	Ta=120℃	1,000h	0 / 20
Low temperature storage life	JEITA ED-4701 / 200A(202A)	Ta=−40℃	1,000h	0 / 20
Wet high temperature storage life	JEITA ED-4701 / 100A(103A)	Ta=85℃ Rh=85%	1,000h	0 / 20
Thermal shock	JEIAJ ED-4701 / 100A(105A)	Ta=−40℃ to 110℃ (each 15min)	1,000 cycles	0 / 20
Thermal shock operating	JEITA ED-4701 / 100A(105A)	Ta=−40℃(OFF) to 85℃(I_F=10mA ON) (each 15min)	1,000 cycles	0 / 20
Cycled temperature humidity operating life	EIAJ ED-4701 / 200(203)	Ta=−30℃ to 80℃ 95% 8h / cycle I_F=10mA 5min on-off	30 cycles	0 / 20
Resistance to reflow soldering	JEITA ED-4701 / 301A(301D)	Moisture Soak : 60℃ 60% 120h Preheating : 150 to 180℃ 90-120sec Soldering : 260℃ peak	2 times	0 / 20
Electrostatic discharge (ESD)	JEITA ED-4701 / 302(304A)	C=100pF R2=1.5kΩ ±2,000V	3 times of each polarity	0 / 20
Vibration, variable frequency	JEITA ED4701 / 400A(403A)	98.1m/s^2 (10G) 100 to 2,000Hz 20min sweep XYZ direction	2h of each direction	0 / 20

2. Failure criteria

Item	Symbol	Condition	Failure criteria
Luminous intensity	I_V	I_F=10mA	Testing Min. Value ＜ Standard Min. Value × 0.5
Forward voltage	V_F	I_F=10mA	Testing Max. Value ≧ Standard Max. Value × 1.2
Reverse current	I_R	V_R=5V	Testing Max. Value ≧ Standard Max. Value × 2.5
Cosmetic appearance	-	-	Notable discoloration, deformation and cracking

VXGW1152GDS-3C3J3-TR

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