JIN ZON ENTERPRISE CO., LTD.

TEL:886-2-2711-1093~5 FAX:886-2-2731-0902 ,2776-4624

Address：4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

DEVICE NO.: JTL-FV24I-3F4

FEATURE:

Chip material: AlGaInP

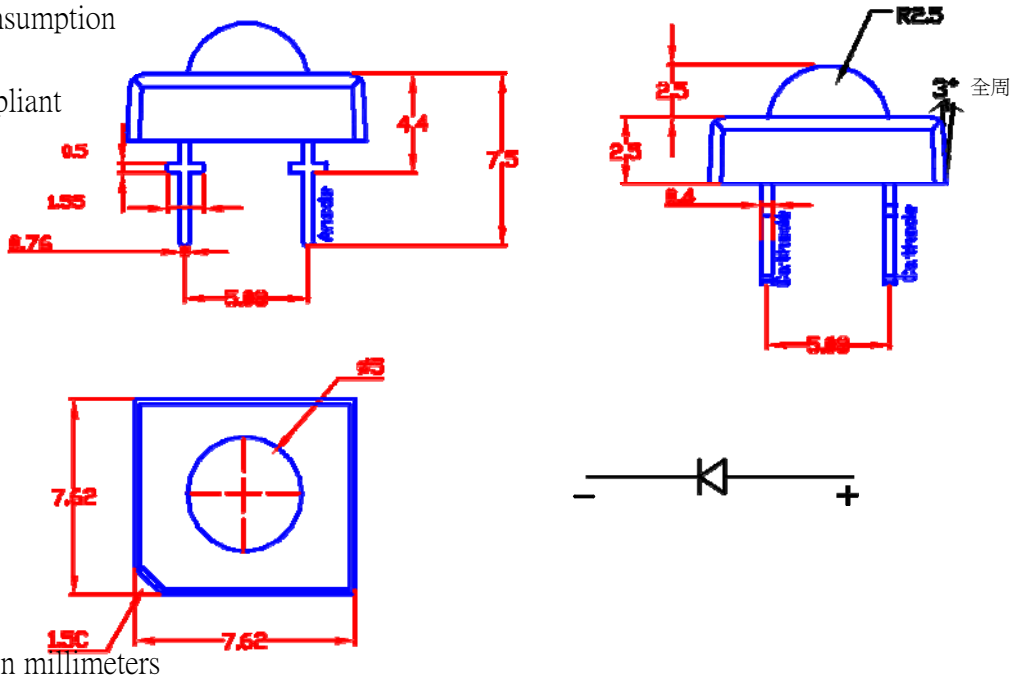
Lens appearance: water clear

High efficiency, low power consumption

Low profile, wide view angle

Lead (pb) free and ROHS compliant

PACKAGE DIMENSIONS:



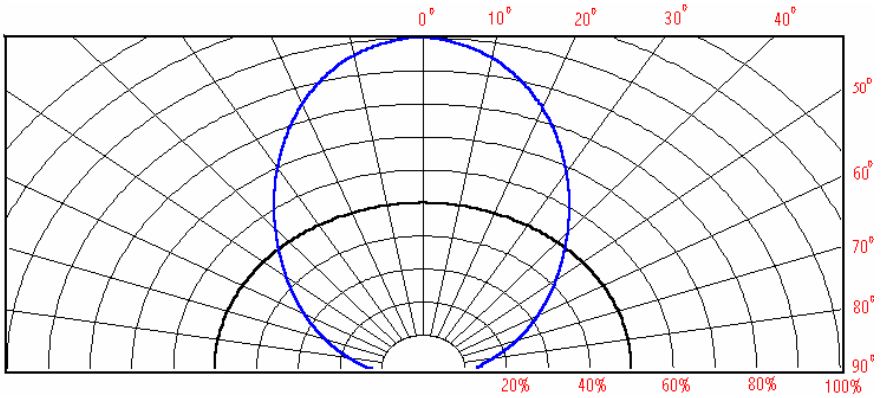
NOTE:

All dimensions are in millimeters

Tolerance is ±0.25（.010）mm unless otherwise noted.

Protruded resin under flange is 1.0mm（.04）max.

Radiation diagrams:



DEVICE DESCRIPTION.:

DEVICE NO.	LED CHIP		LENS/FACE COLOR
	Material	Emitting Color	
JTL-FV24I-3F4	AlGaInP	RED	water clear

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DEVICE NO.:JTL-FV24I-3F4

ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃)

Parameter	Symbol	Value			Unit	Test condition
		Min.	Typ.	Max.		
Forward Voltage	V_f	1.8	2.25	2.7	V	I_F=50mA
Luminous intensity	I_V	1700	3500	---	mcd	I_F=50mA
Luminous Flux	Φ_M	1.25	2.2	---	lm	If=50mA
Wavelength	λd	620		630	(nm)	I_F=50mA
Reverse Current	I_R	---	---	10	μA	V_R=5V
Viewing angle	$2\Theta_{1/2}$	---	80	---	Deg	I_F=50mA

1.Luminous intensity (IV) ±10%, (Forward Voltage)VF ±0.1V, (Wavelength)λd ±0.5nm

2.IS standard testing

Absolute Maximum Ratings (Ta=25℃)

Item	Symbol	Value	Unit
Power Dissipation	PD	120	mW
DC Forward Current	IF	70	mA
Pulsed Forward Current	IFP	100*	mA
Reverse Voltage	VR	5	V
Operating Temperature	Topr	-30 ~ +80▲	℃
Storage Temperature	Tstg	-40 ~ +100	℃
Soldering Temperature	Tsol	260for5sec△	℃

* Duty 1/10 Pulse Width 0.1ms △ At the position of 4mm from the bottom of the package ▲Please refer to the Curve of Forward Current vs. Temperature.

Range of bins

Rank(Bin 碼)	9	10'	11'	12'	13
Luminous Intensity(mlm)	1250-1630	1630-2120	2120-2760	2760-3590	3590-4670
Rank(Bin 碼)					
λd					

' Bin codes in bold are the main bins

※Specifications are subject to change without notice.

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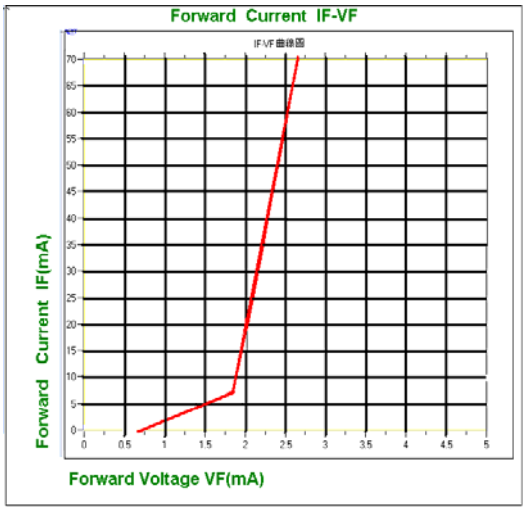
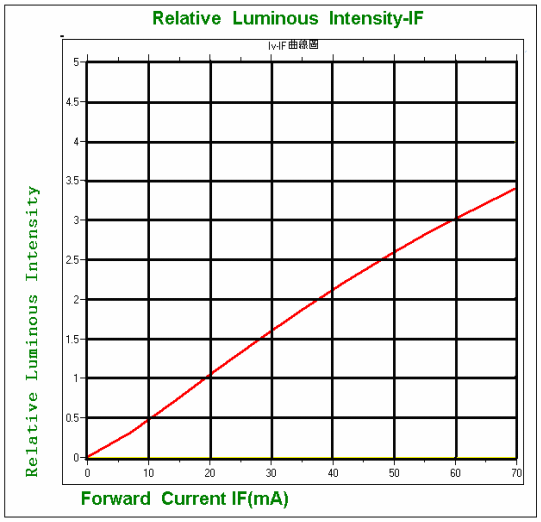
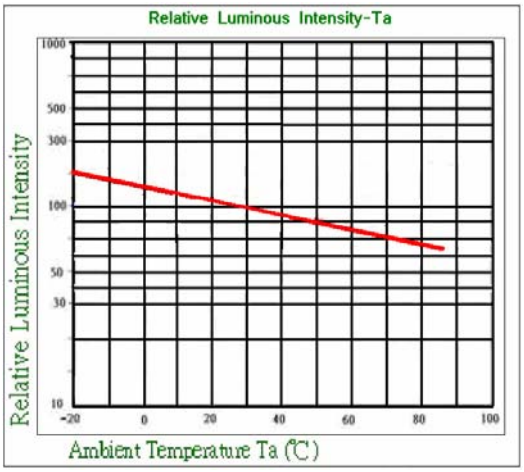
Address : 4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

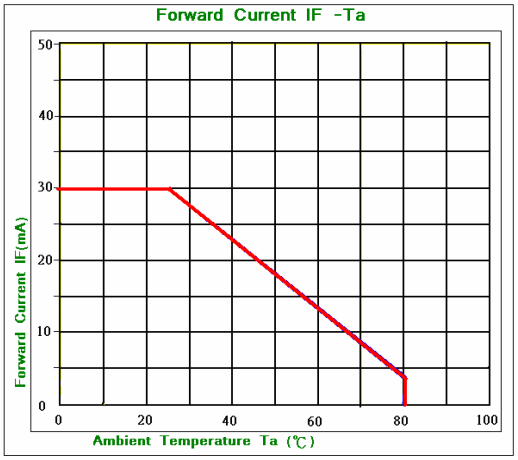
DEVICE NO.: JTL-FV24I-3F4

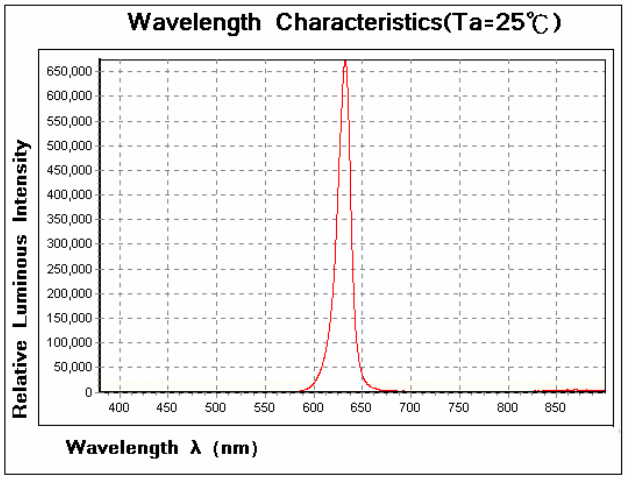
Electrical characteristic graph











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Address : 4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

GENERAL INFORMATION

PRECAUTIONS FOR USING CHIP LED / THROUGH HOLE LED PRODUCTS

SOLDERING:

Manual Of Soldering

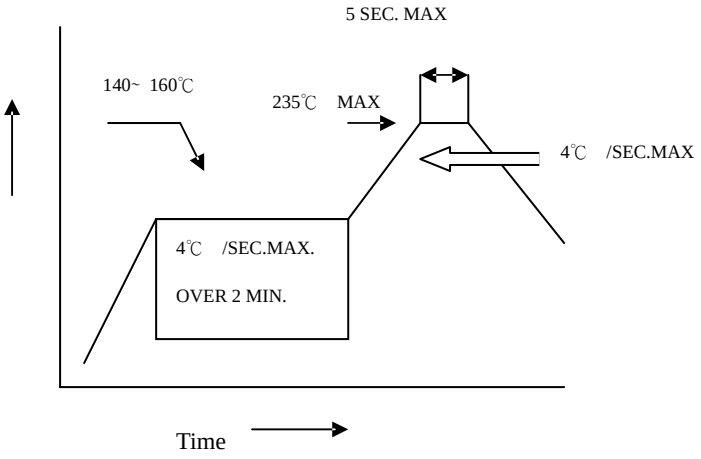
The temperature of the soldering iron tip should not be higher than 300 ‘C (572’F) and soldering within 3 seconds per solder-land is to be observed.

Reflow Soldering:

Preheating: 140’C –160’C +- 5’C, within 2 minutes. Operation

heating: 235 ‘C(Max.), within 5 seconds.(Max.) Gradual Cooling

(Avoid quenching)

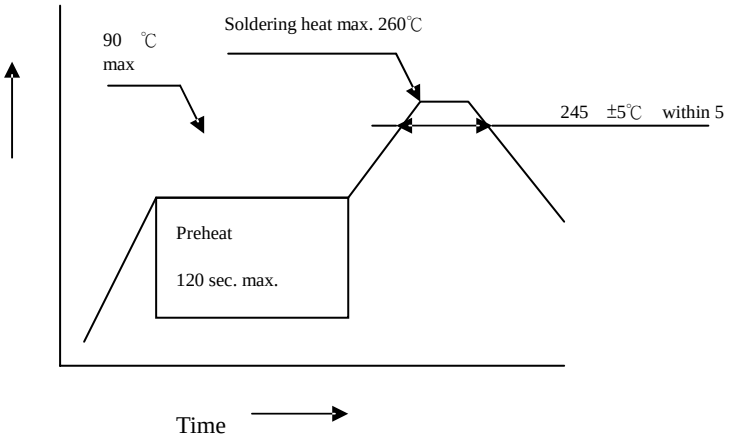


Dip soldering (Wave Soldering);

Preheating: 90’C max in 120 max.

Operation heating: 260 ‘C max ,, within 5 seconds.(Max.)

Gradual Cooling (Avoid quenching)



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Address：4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

GENERAL INFORMATION

PRECAUTIONS FOR USING CHIP LED / THROUGH HOLE LED PRODUCTS

When using soldring iron**:** 250℃ max. (Temperature of soldering iron tip), within 3 seconds.

When soldering a row of LED on a PCB**,** please do not solder both leads of a LED in sequence. (Soldering all of the positive leads first, then all of the negative leads.)

When assembly other electronic parts to a PCB with LEDs, care must be taken the curing time for the whole PCB should be less than 60 seconds, at less than a temperature of 120℃.

ASSEMBLING

Care must be taken not to apply external force, stress during assembling process.

Care must be taken the assembling holes on the PCB matches the leads of the LEDS.

HANDLING:

Please pay attention any cause stress to the epoxy resin portion of leds while it is exposed to high temperature.

Please pay attention any cause rub the epoxy resin portion of leds with hard or sharp article such as the sand blast and the metal hook.

Notes for designing:

Please pay attention to provide the current limiting resistor in the circuit so as to drive the leds within the rated figures. Also, pay attention not to overload leds with instantaneous voltage at the turning On and Off of the circuit. Please pay attention when using the pulse drive, keeping the average current within the rated figures. Also, the circuit should be designed so as be subjected to reverse voltage when turning off the leds.

ESD (Electrostatic Discharge)

(GaN) Gallium Nitride based LEDs are extremely sensitive to ESD (Electrostatic Discharge).

Care must be taken to use necessary meter to test the static and avoid ESD when handling these LEDs

Proper grounding of products or machines, using static dissipative mats, static dissipative containers, static dissipative working uniforms and shoes, an ionizer in the facility or environment are recommended to be effective against ESD where ESD may be generated easily and soldering iron with a grounded tip is also recommended.

When inspecting the final products in which LEDs are assembled, it is considered to inspect whether the assembled LEDs are damaged by ESD or not.

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PRECAUTIONS FOR USING CHIP LED / THROUGH HOLE LED PRODUCTS

CLEANING:

Care must be taken not to use any un-identified chemical to clean LEDs, the following may damage products or LED chips: attachment or contact of residual flux solvent onto the product surface or to LED chips, or invasion of the same into the product. If necessary, soak LEDs in alcohol for a time not exceeding 30 seconds in normal temperature.

Storage:

When stored the LEDs, care must be taken in an environment of normal temperature and humidity.

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Address：4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

DEVICE NO.: JTL-FVGB-3F4

FEATURE:

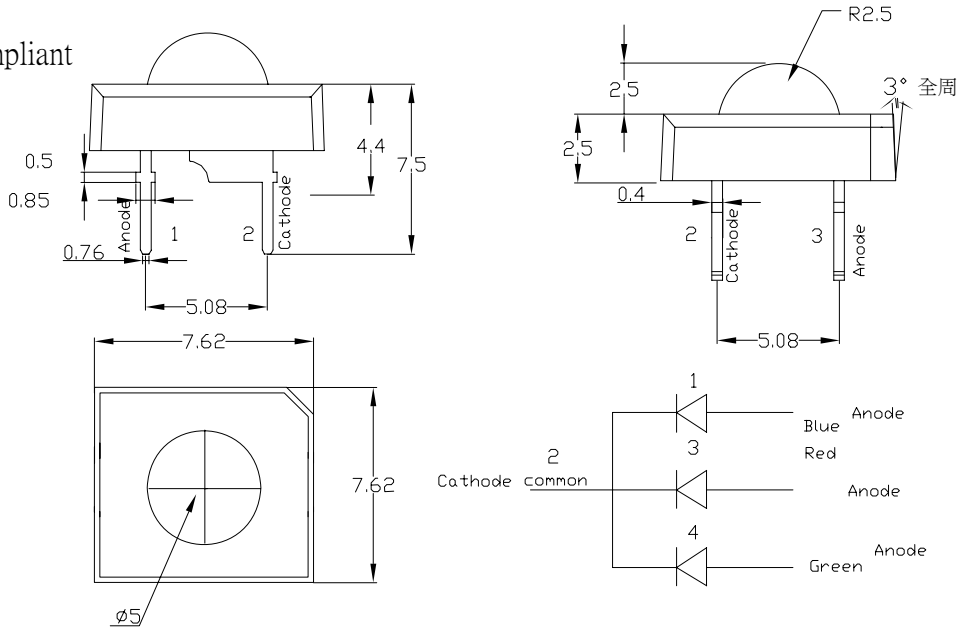
Chip material: AlGaInP, InGaN, Lens appearance: water clear

High efficiency, low power consumption

Low profile, wide view angle

Lead (pb) free and ROHS compliant

PACKAGE DIMENSIONS:



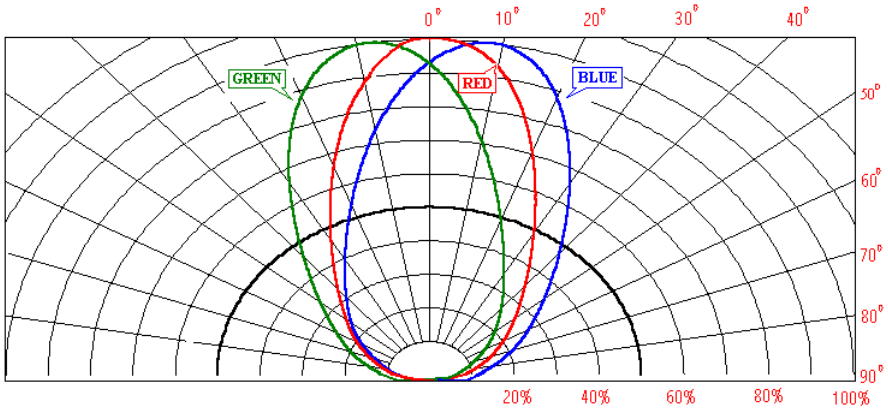
NOTE:

All dimensions are in millimeters

Tolerance is ±0.25（.010）mm unless otherwise noted.

Protruded resin under flange is 1.0mm（.04）max.

Radiation diagrams:



DEVICE DESCRIPTION.:

DEVICE NO.	LED CHIP		LENS/FACE COLOR
	Material	Emitting Color	
JTL-FVGB-3F4	AlGaInP	RED	water clear
	P:Au N:Au	GREEN	
	InGaN	BLUE	

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DEVICE NO.:JTL-FVGB-3F4

ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃)

Parameter	Symbol		Value			Unit	Test condition
			Min.	Typ.	Max.		
Forward Voltage	V_f	R	1.8	2.25	2.7	V	I=30mA
		G	3.0	3.3	4.0	V	I=30mA
		B	3.0	3.3	4.0	V	I=30mA
Luminous intensity	I_v	R	440	900	---	mcd	I=30mA
		G	960	1900	---	mcd	I=30mA
		B	250	500	---	mcd	I=30mA
Wavelength	λd	R	620	---	630	(nm)	I=30mA
		G	519		537	(nm)	I=30mA
		B	461	---	473	(nm)	I=30mA
Reverse Current	I_r		---	---	10	μA	V_r=5V
Viewing angle	$2\theta_{1/2}$		---	70	---	Deg	I=30mA

Luminous intensity (IV) ±10%, (Forward Voltage)VF ±0.1V, (Wavelength)λd ±0.5

Absolute Maximum Ratings (Ta=25℃)

Item	Symbol	Value			Unit
		Red	Green	Blue	
Power Dissipation	PD	120	120	120	mW
DC Forward Current	IF	30	30	30	mA
Pulsed Forward Current	IFP	100 *	100 *	100 *	mA
Reverse Voltage	VR	5	5	5	V
Operating Temperature	Topr	-30~ +80▲			℃
Storage Temperature	Tstg	-40 ~ +100			℃
Soldering Temperature△	Tsol	260for5sec△			℃

* Duty 1/10 , Pulse Width 0.1ms △ At the position of 4mm from the bottom of the package▲Please refer to the Curve of Forward Current vs. Temperature.

Directive Characteristics (Ta=25℃)

※Specifications are subject to change without notice.

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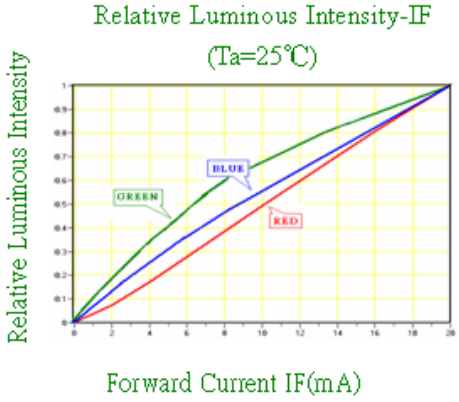
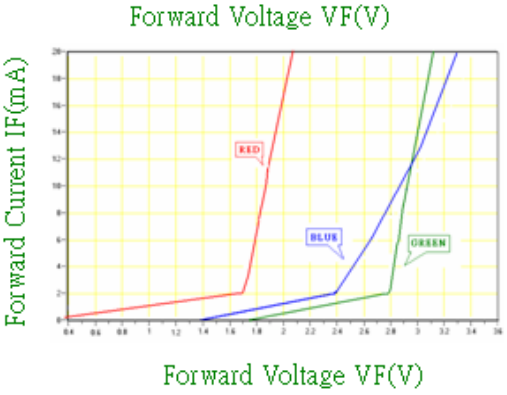
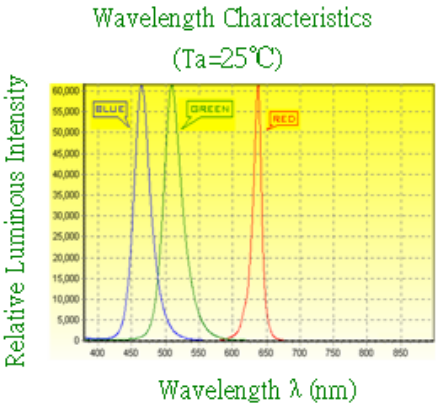
Address : 4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

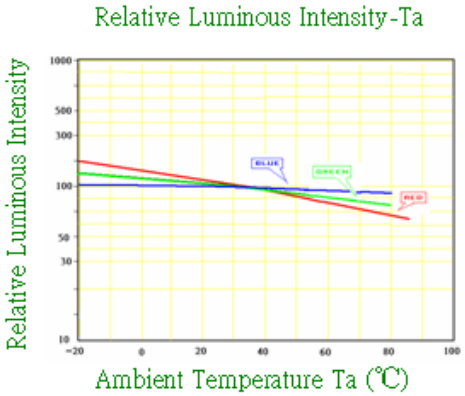
DEVICE NO.: JTL-FVGB-3F4

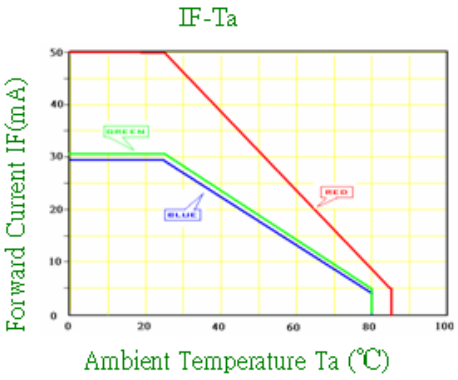
Electrical characteristic graph











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GENERAL **INFORMATION**

PRECAUTIONS FOR USING CHIP LED / THROUGH HOLE LED PRODUCTS

SOLDERING:

Manual Of Soldering

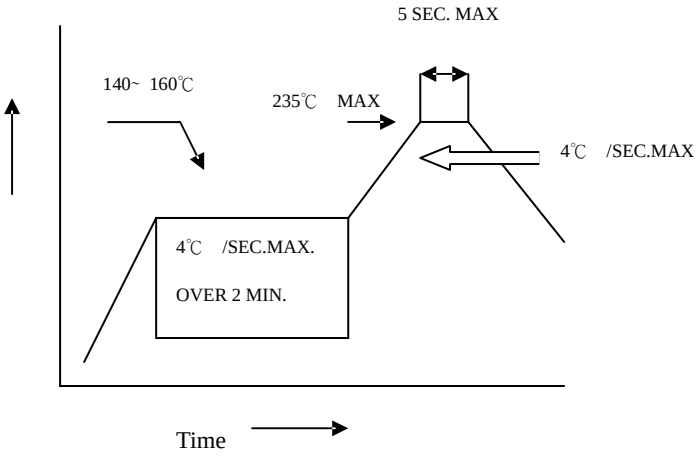
The temperature of the soldering iron tip should not be higher than 300 ‘C (572’F) and soldering within 3 seconds per solder-land is to be observed.

Reflow Soldering:

Preheating: 140’C –160’C +- 5’C, within 2 minutes.

Operation heating: 235 ‘C(Max.), within 5 seconds.(Max.)

Gradual Cooling (Avoid quenching)

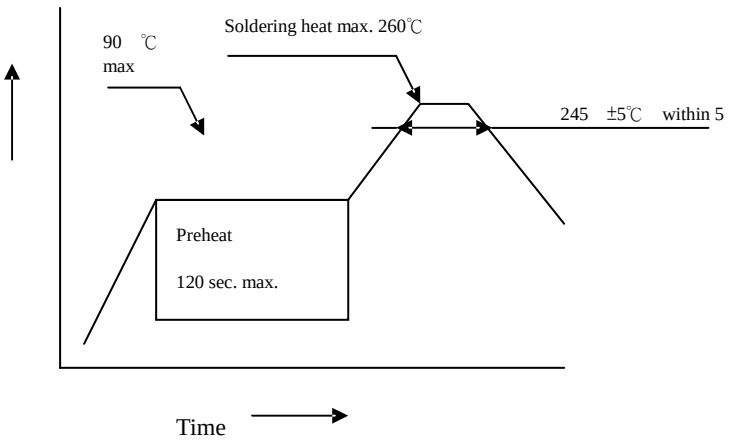


Dip soldering (Wave Soldering);

Preheating: 90’C max in 120 max.

Operation heating: 260 ‘C max ,, within 5 seconds.(Max.)

Gradual Cooling (Avoid quenching)



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GENERAL INFORMATION

PRECAUTIONS FOR USING CHIP LED / THROUGH HOLE LED PRODUCTS

When using soldring iron**:** 250℃ max. (Temperature of soldering iron tip), within 3 seconds.

When soldering a row of LED on a PCB**,** please do not solder both leads of a LED in sequence. (Soldering all of the positive leads first, then all of the negative leads.)

When assembly other electronic parts to a PCB with LEDs, care must be taken the curing time for the whole PCB should be less than 60 seconds, at less than a temperature of 120℃.

ASSEMBLING

Care must be taken not to apply external force, stress during assembling process.

Care must be taken the assembling holes on the PCB matches the leads of the LEDS.

HANDLING:

Please pay attention any cause stress to the epoxy resin portion of leds while it is exposed to high temperature.

Please pay attention any cause rub the epoxy resin portion of leds with hard or sharp article such as the sand blast and the metal hook.

Notes for designing:

Please pay attention to provide the current limiting resistor in the circuit so as to drive the leds within the rated figures. Also, pay attention not to overload leds with instantaneous voltage at the turning On and Off of the circuit. Please pay attention when using the pulse drive, keeping the average current within the rated figures. Also, the circuit should be designed so as be subjected to reverse voltage when turning off the leds.

ESD (Electrostatic Discharge)

(GaN) Gallium Nitride based LEDs are extremely sensitive to ESD (Electrostatic Discharge). Care must be taken to use necessary meter to test the static and avoid ESD when handling these LEDs

Proper grounding of products or machines, using static dissipative mats, static dissipative containers, static dissipative working uniforms and shoes, an ionizer in the facility or environment are recommended to be effective against ESD where ESD may be generated easily and soldering iron with a grounded tip is also recommended.

When inspecting the final products in which LEDs are assembled, it is considered to inspect whether the assembled LEDs are damaged by ESD or not.

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GENERAL **INFORMATION**

PRECAUTIONS FOR USING CHIP LED / THROUGH HOLE LED PRODUCTS

CLEANING:

Care must be taken not to use any un-identified chemical to clean LEDs, the following may damage products or LED chips: attachment or contact of residual flux solvent onto the product surface or to LED chips, or invasion of the same into the product. If necessary, soak LEDs in alcohol for a time not exceeding 30 seconds in normal temperature.

Storage:

When stored the LEDs, care must be taken in an environment of normal temperature and humidity.

JIN ZON ENTERPRISE CO., LTD.

TEL:886-2-2711-1093~5 FAX:886-2-2731-0902 ,2776-4624

Address：4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

DEVICE NO.: JTL-FY24I-3F4

FEATURE:

Chip material: AlGaInP

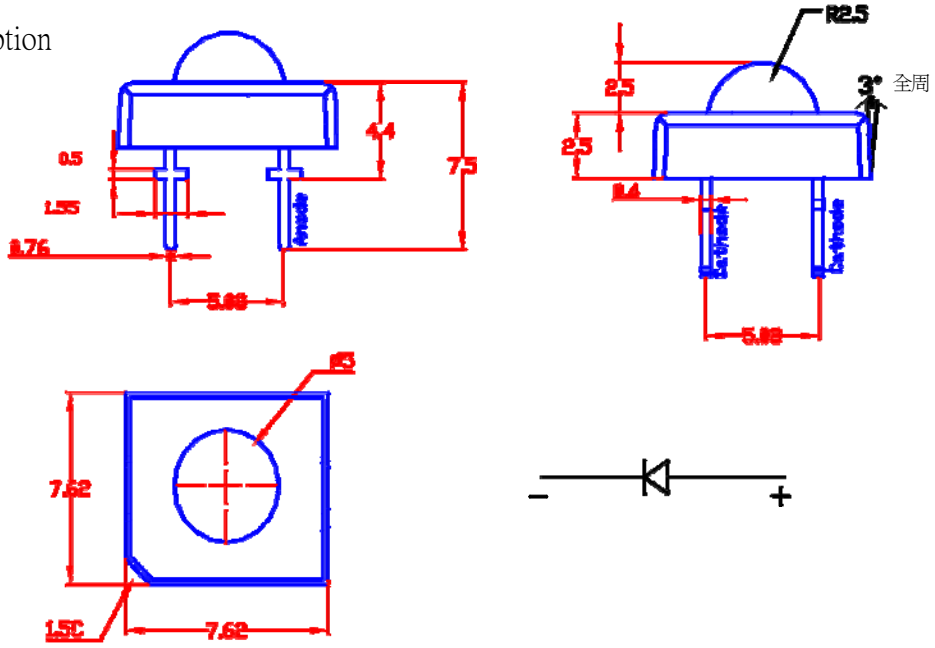
Lens appearance: water clear

High efficiency, low power consumption

Low profile, wide view angle

Lead (pb) free and ROHS compliant

PACKAGE DIMENSIONS:



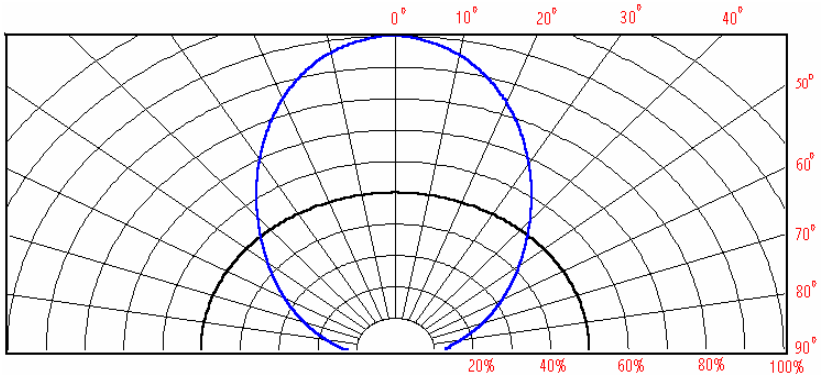
NOTE:

All dimensions are in millimeters

Tolerance is ±0.25（.010）mm unless otherwise noted.

Protruded resin under flange is 1.0mm（.04）max.

Radiation diagrams:



DEVICE DESCRIPTION.:

DEVICE NO.	LED CHIP		LENS/FACE COLOR
	Material	Emitting Color	
JTL-FY24I-3F4	AlGaInP	YELLOW	water clear

JIN ZON ENTERPRISE CO., LTD.

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Address：4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

DEVICE NO.:JTL-FY24I-3F4

ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃)

Parameter	Symbol	Value			Unit	Test condition
		Min.	Typ.	Max.		
Forward Voltage	V_f	1.8	2.45	2.6	V	I_F=50mA
Luminous intensity	I_V	1700	3500	---	mcd	I_F=50mA
	LM	0.96	2.21	---	mlm	I_F=50mA
Wavelength	λ P	585		595	(nm)	I_F=50mA
Reverse Current	I_R	---	---	10	μA	V_R=5V
Viewing angle	$2\theta_{1/2}$	---	80	---	Deg	I_F=50mA

▲Luminous intensity (IV) ±10%, (Forward Voltage)VF ±0.1V, (Wavelength)λ d ±0.5nm

Absolute Maximum Ratings (Ta=25℃)

Item	Symbol	Value	Unit
Power Dissipation	PD	120	mW
DC Forward Current	IF	70	mA
Pulsed Forward Current	IFP	100*	mA
Reverse Voltage	VR	5	V
Operating Temperature	Topr	-30 ~ +80▲	℃
Storage Temperature	Tstg	-40 ~ +100	℃
Soldering Temperature	Tsol	260℃×5sec△	℃

* Duty 1/10 Pulse Width 0.1ms △ At the position of 4mm from the bottom of the package▲Please refer to the Curve of Forward Current vs. Temperature.

Range of bins

Rank(Bin 碼)	8	9'	10'	11'	12
Luminous Intensity(mcd)	960-1250	1250-1630	1630-2120	2120-2760	2760-3590

Rank(Bin 碼)	E	F	G	H	I	J
λd	586.5-588	588-589.5	589.5-591	591-592.5	595.5-594	594-595.5

' Bin codes in bold are the main bins

※Specifications are subject to change without notice.

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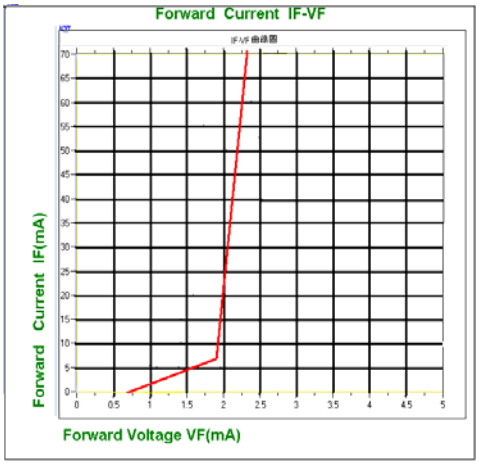
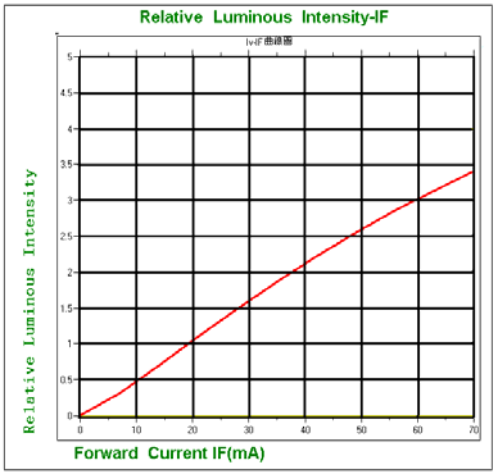
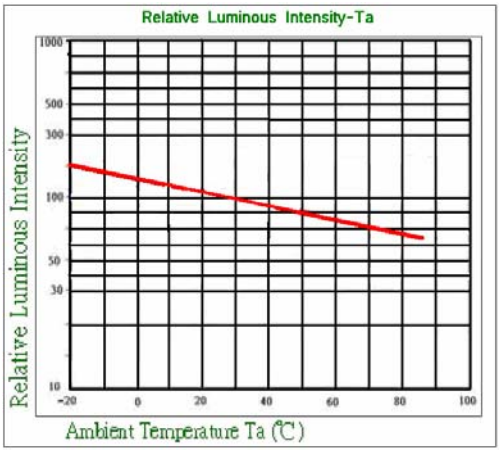
Address：4F-3. No.171. Sec.2. Chang An E. Rd. Taipei. Taiwan. R.O.C.

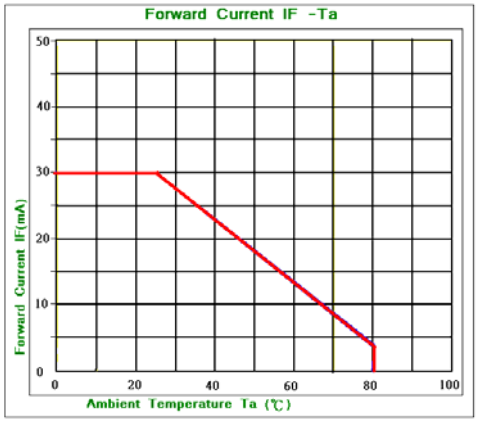
DEVICE NO.: JTL-FY24I-3F4

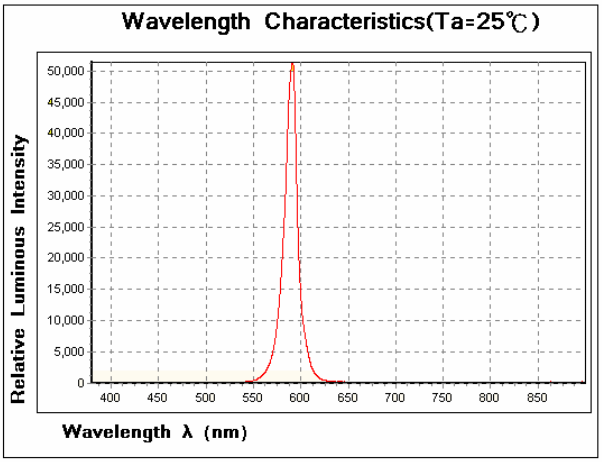
Electrical characteristic graph











JIN ZON ENTERPRISE CO., LTD.

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GENERAL **INFORMATION**

PRECAUTIONS FOR USING CHIP LED / THROUGH HOLE LED PRODUCTS

SOLDERING:

Manual Of Soldering

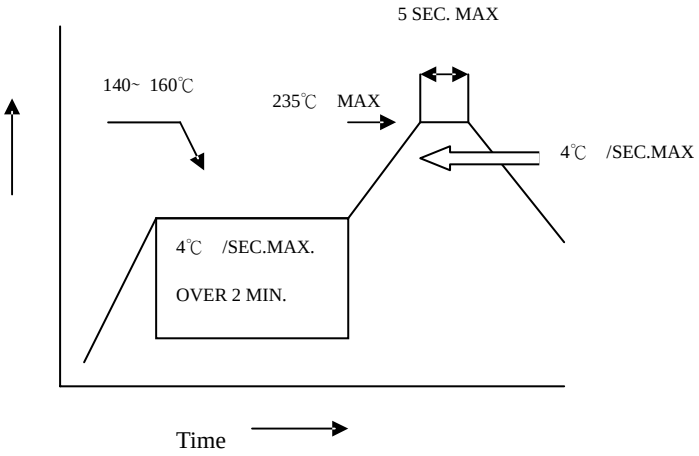
The temperature of the soldering iron tip should not be higher than 300 ‘C (572’F) and soldering within 3 seconds per solder-land is to be observed.

Reflow Soldering:

Preheating: 140’C –160’C +- 5’C, within 2 minutes.

Operation heating: 235 ‘C(Max.), within 5 seconds.(Max.)

Gradual Cooling (Avoid quenching)

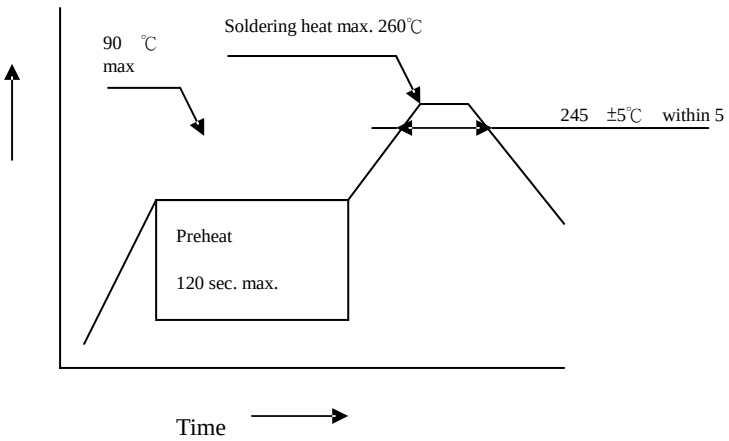


Dip soldering (Wave Soldering);

Preheating: 90’C max in 120 max.

Operation heating: 260 ‘C max ,, within 5 seconds.(Max.)

Gradual Cooling (Avoid quenching)



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When using soldring iron**:** 250℃ max. (Temperature of soldering iron tip), within 3 seconds.

When soldering a row of LED on a PCB**,** please do not solder both leads of a LED in sequence. (Soldering all of the positive leads first, then all of the negative leads.)

When assembly other electronic parts to a PCB with LEDs, care must be taken the curing time for the whole PCB should be less than 60 seconds, at less than a temperature of 120℃.

ASSEMBLING

Care must be taken not to apply external force, stress during assembling process.

Care must be taken the assembling holes on the PCB matches the leads of the LEDS.

HANDLING:

Please pay attention any cause stress to the epoxy resin portion of leds while it is exposed to high temperature.

Please pay attention any cause rub the epoxy resin portion of leds with hard or sharp article such as the sand blast and the metal hook.

Notes for designing:

Please pay attention to provide the current limiting resistor in the circuit so as to drive the leds within the rated figures. Also, pay attention not to overload leds with instantaneous voltage at the turning On and Off of the circuit. Please pay attention when using the pulse drive, keeping the average current within the rated figures. Also, the circuit should be designed so as be subjected to reverse voltage when turning off the leds.

ESD (Electrostatic Discharge)

(GaN) Gallium Nitride based LEDs are extremely sensitive to ESD (Electrostatic Discharge). Care must be taken to use necessary meter to test the static and avoid ESD when handling these LEDs

Proper grounding of products or machines, using static dissipative mats, static dissipative containers, static dissipative working uniforms and shoes, an ionizer in the facility or environment are recommended to be effective against ESD where ESD may be generated easily and soldering iron with a grounded tip is also recommended.

When inspecting the final products in which LEDs are assembled, it is considered to inspect whether the assembled LEDs are damaged by ESD or not.

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GENERAL **INFORMATION**

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CLEANING:

Care must be taken not to use any un-identified chemical to clean LEDs, the following may damage products or LED chips: attachment or contact of residual flux solvent onto the product surface or to LED chips, or invasion of the same into the product. If necessary, soak LEDs in alcohol for a time not exceeding 30 seconds in normal temperature.

Storage:

When stored the LEDs, care must be taken in an environment of normal temperature and humidity.