

Part Number: AM2520F3C03

Features

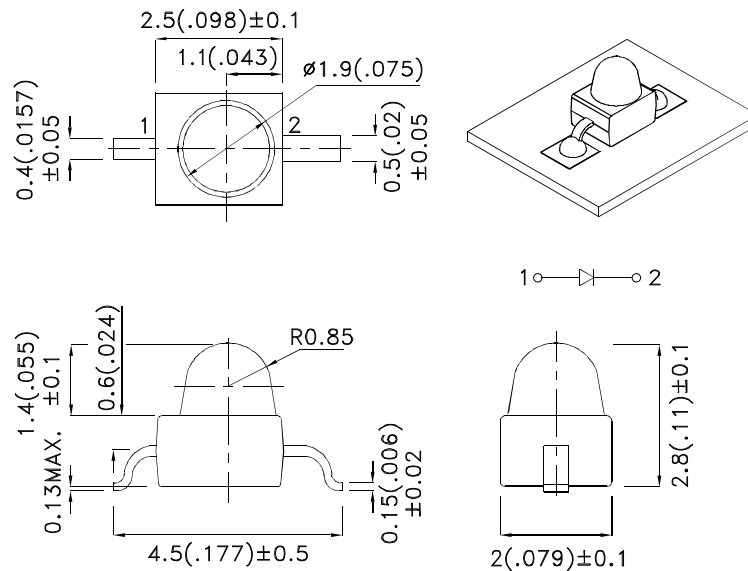
- Subminiature package.
- Mechanically and spectrally matched to the phototransistor.
- Gull wing lead.
- Long life - solid state reliability.
- Low package profile.
- Package : 1000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

F3 Made with Gallium Arsenide Infrared Emitting diodes.

Package Dimensions

Datasheet.Directory



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
5. The device has a single mounting surface. The device must be mounted according to the specifications.



Selection Guide

Part No.	Dice	Lens Type	Po (mW/sr) [2] @ 20mA			Viewing Angle [1]
			Code.	Min.	Max.	2θ1/2
AM2520F3C03	F3 (GaAs)	Water Clear	C	5	8	20°
			D	8	12	
			E	12	20	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Radiant Intensity/ luminous flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Parameter	P/N	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Forward Voltage [1]	F3	V _F	1.0	1.2	1.6	V	I _F =20mA
Reverse Current	F3	I _R			10	uA	V _R = 5V
Capacitance	F3	C		90		pF	V _F =0V;f=1MHz
Peak Spectral Wavelength	F3	λ _P	920		960	nm	I _F =20mA
Spectral Bandwidth	F3	Δλ1/2		50		nm	I _F =20mA

Note:

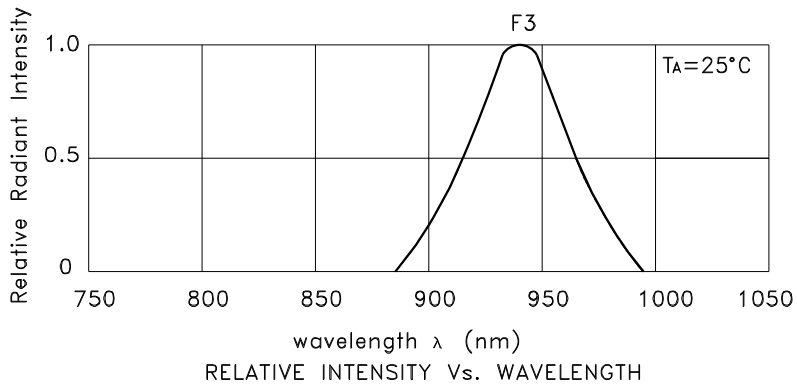
1. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

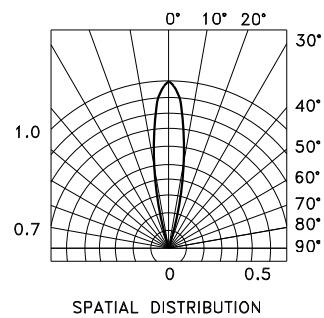
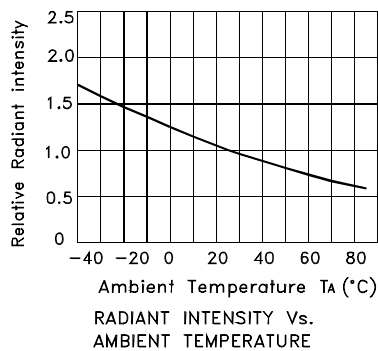
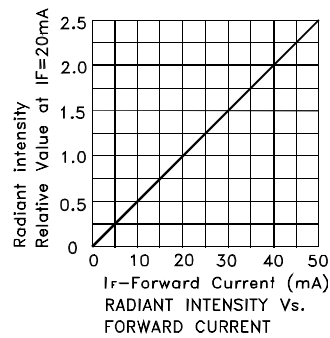
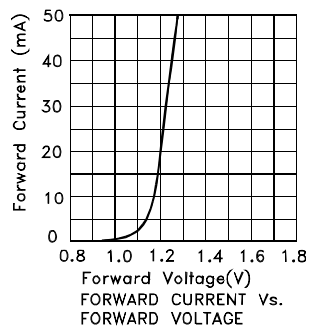
Parameter	Symbol	F3	Units
Power dissipation	P _D	80	mW
DC Forward Current	I _F	50	mA
Peak Forward Current [1]	i _{FS}	1.2	A
Reverse Voltage	V _R	5	V
Operating Temperature	T _A	-40 To +85	°C
Storage Temperature	T _{STG}	-40 To +85	°C

Note:

1. 1/100 Duty Cycle, 10μs Pulse Width.



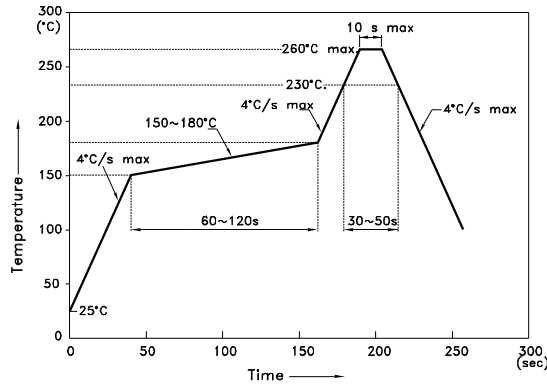
AM2520F3C03



AM2520F3C03

Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

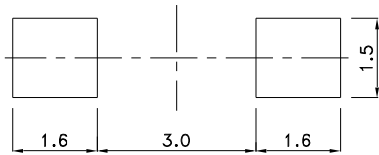
Reflow Soldering Profile For Lead-free SMT Process.



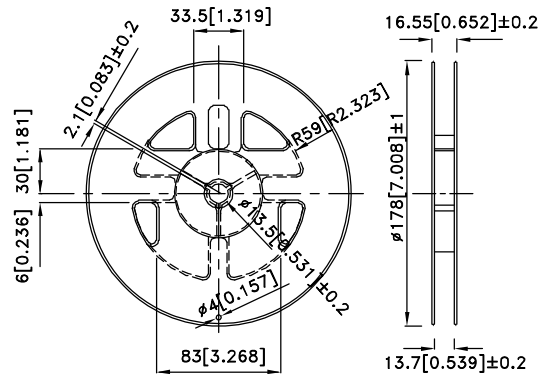
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

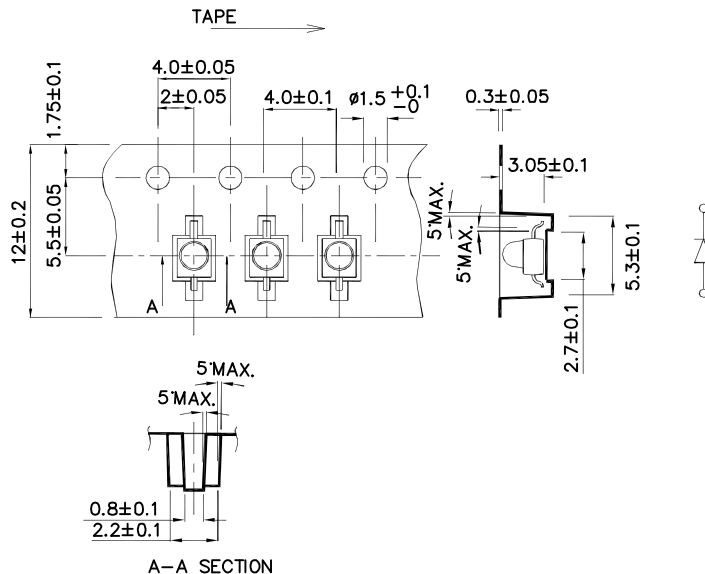
Recommended Soldering Pattern
(Units : mm; Tolerance: ± 0.1)



Reel Dimension

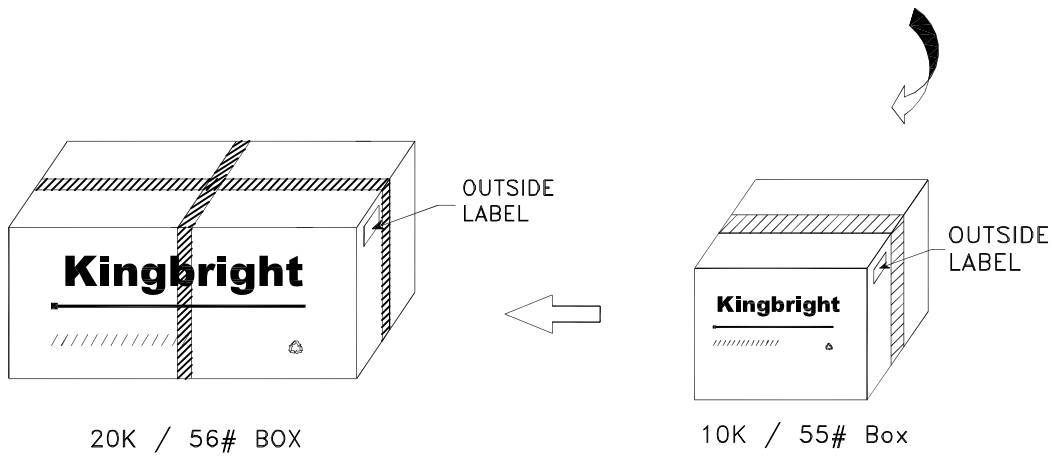
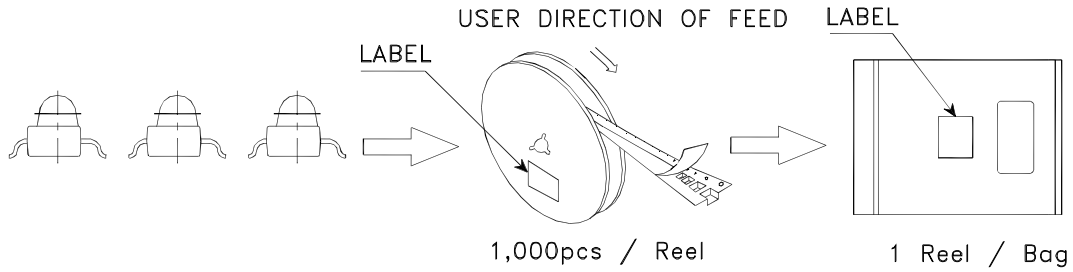



Tape Specifications
(Units : mm)



PACKING & LABEL SPECIFICATIONS

AM2520F3C03



<h2 style="margin: 0;">Kingbright</h2>	
P/NO: AM2520xxx03	
QTY: 1,000 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

All design applications should refer to Kingbright application notes available at <http://www.KingbrightUSA.com/ApplicationNotes>

LED Reliability Test Report

NO. REC2013001021

: ___year___month plan schedule

: ___Customer's requirement

:Verification

supplier	KINGBRIGHT	chip type	/
laboratory	Kingbright Laboratory	chip lot.	/
P/N	AM2520F3C03	Scope Of Inspection	WI-MQ00-R-0106

NO	TEST ITEM	TEST DATE	TEST CONDITION	STANDARDS	JUDGEMENT	LTPD	SAMPLE
1	Continuous operating	2012/11/7 ~ 2012/12/19	IF=20mA T=1000hr	A schedule	PASSED	10%	22pcs
2	High temp. and hum. storage	2012/11/7 ~ 2012/12/19	Ta=85Degree C. T=1000hr RH=85%RH	B schedule	PASSED	10%	22pcs
3	High temp. and hum. Operating	2012/11/7 ~ 2012/12/19	Ta=85Degree C. T=1000hr RH=85%RH IF=5mA	B schedule	PASSED	10%	22pcs
4	Solderability	2012/11/9	Ta=245Degree C. T=5sec	Cover 95%	PASSED	20%	18PCS
5	Soldering resistance	2012/11/12	Ta=260Degree C. T=10sec	A schedule	PASSED	20%	18PCS
6	Thermal shock	2012/11/12 ~ 2012/11/16	Ta=0Degree C.~100Degree C. T=5min~5minx100cycles	B schedule	PASSED	10%	22pcs
7	Drop	2012/11/14 ~ 2012/11/14	H=100cm T=3cycles	B schedule	PASSED	10%	22pcs
8	Vibration	2012/11/14	Accelerate speed 200m/s2 Frequency=100-2000Hz, T=48min, X.Y.Z Three directions,Four times	A schedule	PASSED	10%	22pcs

Standard schedule

	Characteristics item	Symbol	Standards
A	Forward voltage	VF(V)	USL(MAX)
	Reverse current	IR(μA)	USL(MAX)
	Intensity value	Po(mW/sr)	Initial valueX0.6(min)
	Apperance	/	Damage

Specification

Characteristics	Symbol	spec
VF	VF(V)	MAX 1.2 V
IR	IR(uA)	MAX 10 μA
Po	PO(mW/sr)	MIN 1.6 mW/sr
remark	LSL	Initial SPEC LSL
	USL	Initial SPEC USL

Standard schedule

	Characteristics item	Symbol	standards
B	Forward voltage	VF(V)	USL(MAX)
	Reverse current	IR(μA)	USL(MAX)
	Intensity value	Po(mW/sr)	Initial valueX0.8(min)
	Appearance	/	Damage

P.S:LTPD(Lot Tolerance Percent Defective).

Test:Yang Liu

Checked by:Hou Gang

Approved:Alex Huang