

Approved	Checked	Designed	DEVELOPMENT SPECIFICATION	TEMPORARY
	<i>M. H.</i>	<i>M. Nagao</i>		

T Y P E	Red Light Emitting Diode					
APPLICATION	Indicators					
MATERIAL	GaAlAs					
OUTLINE	Attached					
ABSOLUTE MAXIMUM RATINGS	P	*1 I _{FP}	I _{FDC}	V _R	Topr	Tstg
	40	50	15	3	-30~+85	-40~+100
	mW	mA	mA	V	°C	°C
CONDITION	T _a = 25 ± 3 °C					

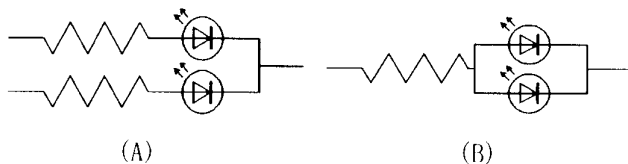
Test Specification

I t e m	Symbol	C o n d i t i o n	Typ	Limit		Unit
				Min	Max	
Forward Voltage	V _F	I _F = 10 mA	1.72		2.5	V
Reverse Leakage Current	I _R	V _R = 3 V			100	μ A
Luminous Intensity *2	I _O	I _F = 10 mA DC	4.2	2.2		med
Peak Emission Wavelength	λ _p	I _F = 10 mA DC	655			nm
Spectral Line Half Width	Δλ	I _F = 10 mA DC	20			nm

- *1 · The Condition of I_{FP} is duty 10 % , Pulse width 1 ms
- Please contact the Panasonic local office if you design at low current (below 1 mA DC) or pulse current operation and have any questions.
- *2 Measurement Tolerance is ±20%.

NOTE

- ★1. Terminal:Plated with gold on copper base.
- ★2. Soldering conditions.
Refer to Handling note.
- ★3. Care should be taken that soldering is done within 3-days after opening the dry package and reel.
- ★4. Circuit to operate LED.



- (A) Recommended circuit.
- (B) The difference of brightness between the LED could be found due to the V_F characteristics of each LED.

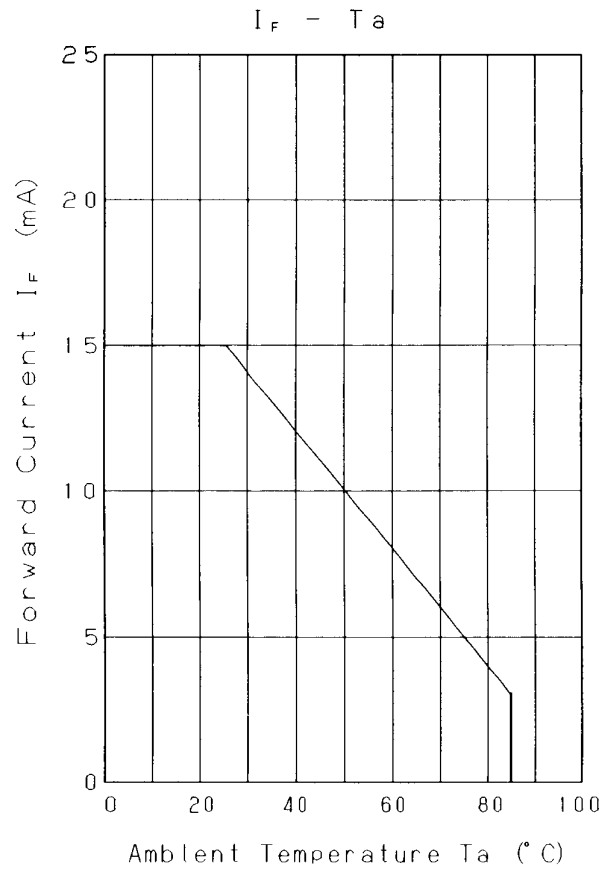
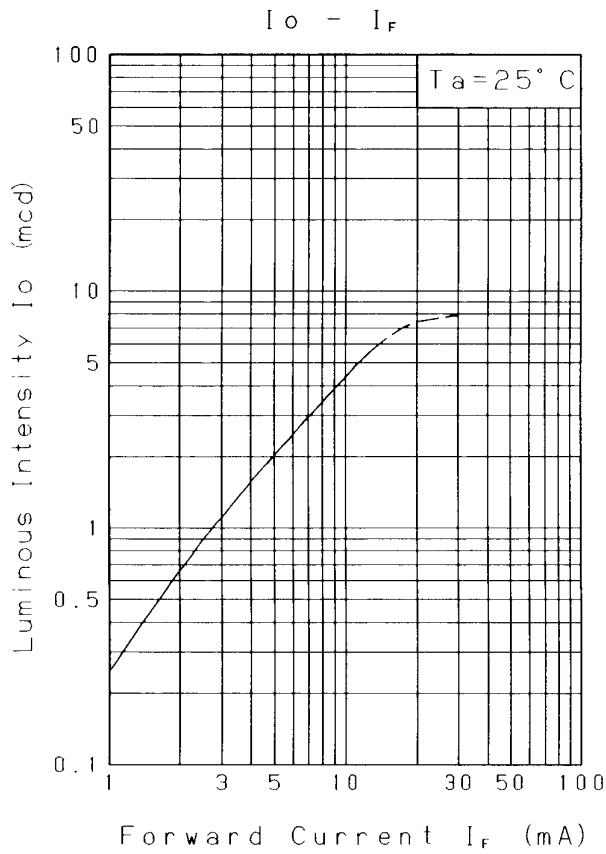
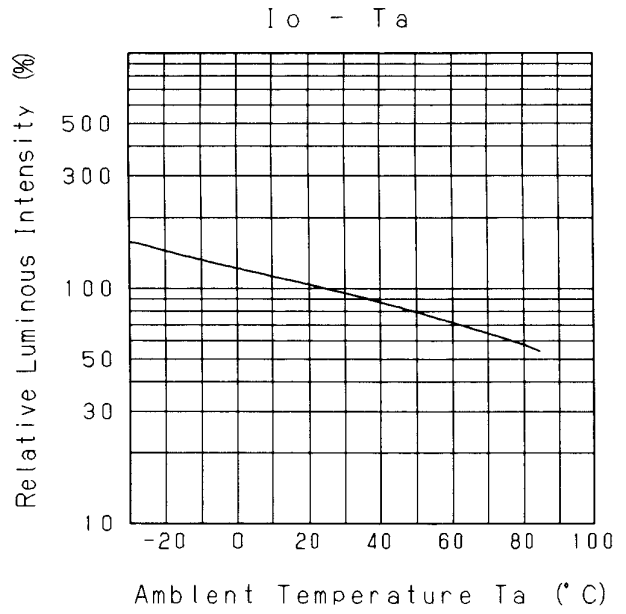
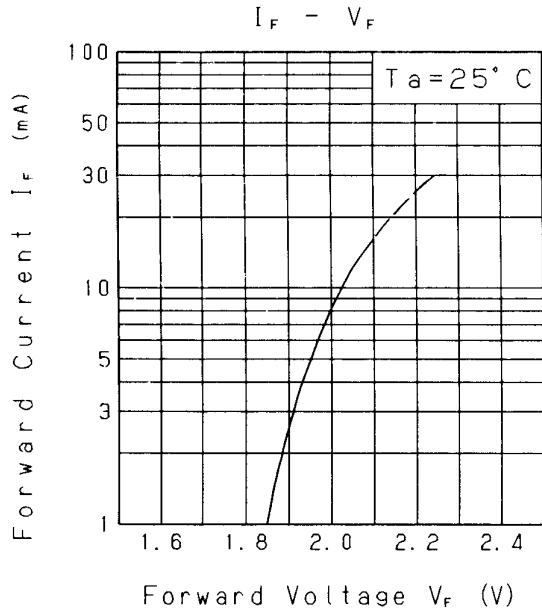
Mar. 13. 2001			

Approved	Checked	Designed
	<i>h. ho</i>	<i>M. Meyer</i>

DEVELOPMENT SPECIFICATION

Tentative: LNJ219R9ARA

TEMPORARY



Mar. 13. 2001

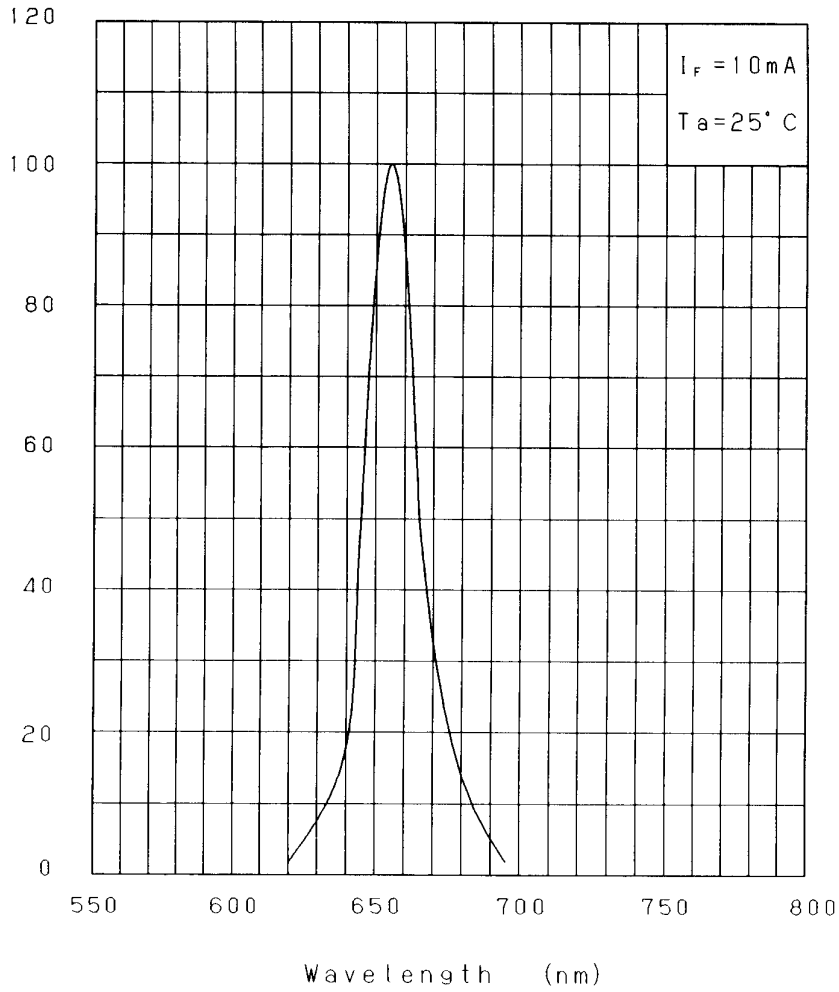
Approved	Checked	Designed
	<i>M. H. J.</i>	<i>M. Nagase</i>

DEVELOPMENT SPECIFICATION

Tentative: LNJ219R9ARA

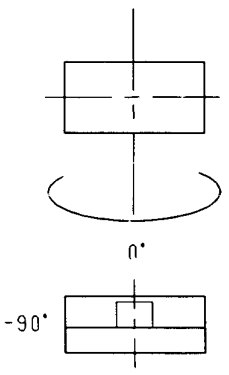
TEMPORARY

Relative Luminous Intensity
Wavelength Characteristics

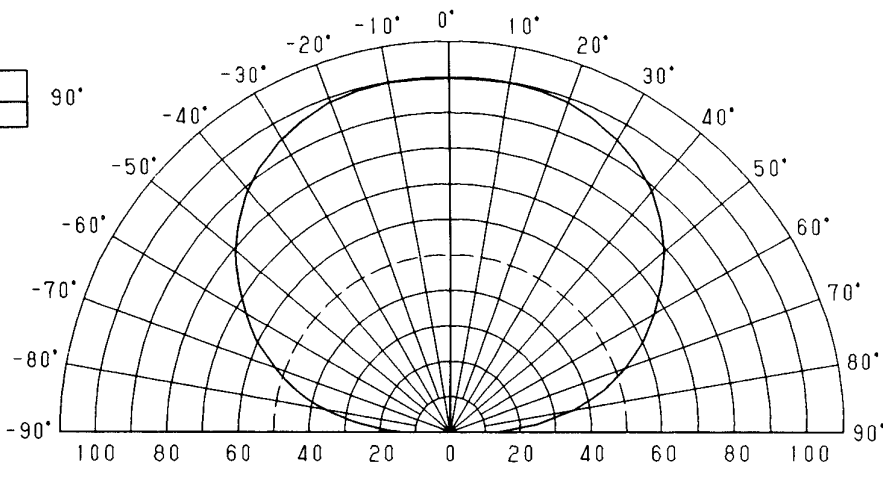


Mar. 13. 2001

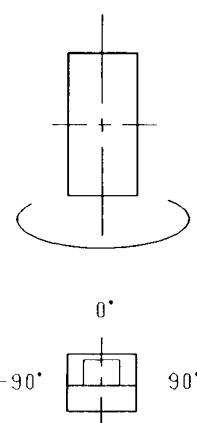
Approved	Checked	Designed	DEVELOPMENT SPECIFICATION	Tentative: LNJ219R9ARA	TEMPORARY
	<i>M. H.</i>	<i>M. Nagai</i>			



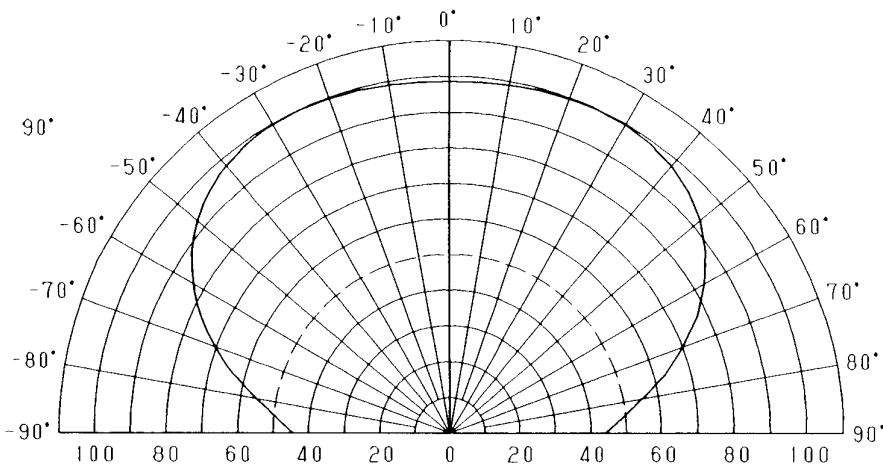
Directive Characteristics



Relative Luminous Intensity (%)



Directive Characteristics

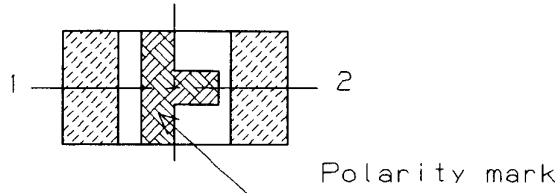
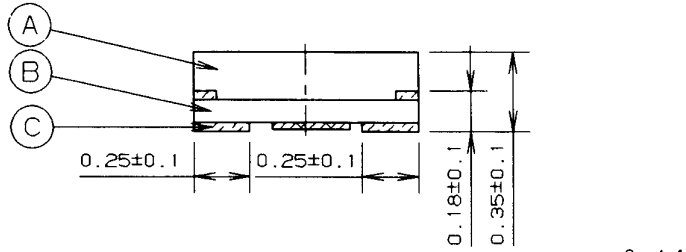
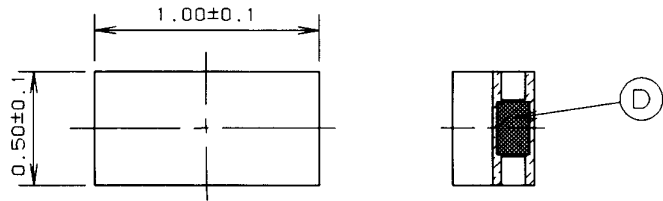


Relative Luminous Intensity (%)

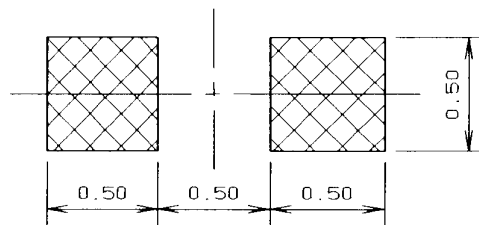
Mar. 13. 2001			
---------------	--	--	--

Downloaded from Elcodis.com electronic components distributor

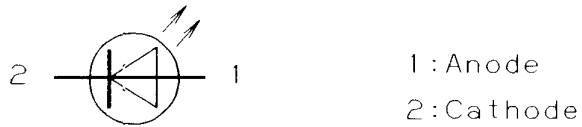
Approved	Checked	Designed	DEVELOPMENT SPECIFICATION (O U T L I N E) P/N:LNJ219R9ARA	TEMPORARY		
	<i>h.wei</i>	<i>M. Wang</i>				



Recommended Land Layout



Polarity



NOTE)

1. Measurement of the package doesn't include electrode projection.
2. Unit: mm
3. Materials: (A) Epoxy resin
(B) Substructure
(C) Terminal (Cu/Ni/Au plating)
(D) Potting resin

Mar. 13. 2001			