Approved | Checked | Prepared

DEVELOPMENT SPECIFICATION

LNG995PFBW

TYPE	Blue Light Emitting Diode
MATERIAL	GaN
APPLICATION	Indicators
OUTLINE	This spec is "Target Spec", so it may be revised a part of it as time of establishment of "Regular Spec".
CONNECTION	

ABSOLUTE MAXIMUM RATINGS

P	I_{FP}*	I_{FDC}	V_R	T_{opr}	T_{stg}
120	100	30	5	-25~+80	-30~+100
mW	mA	mA	V	℃	℃

CONDITION Ta=25±3℃

Test Specification

Item	Symbol		Condition	Typ	Limit Min	Limit Max	Unit
Forward Voltage	V_F		I_F = 20 mA	3.5		4.0	V
Reverseleakage Current	I_R		V_R = 5 V			10	μA
Luminous Intensity	Io		I_F = 20 mA	370	145		mcd
Peak Emission Wavelength	λp		I_F = 20 mA	468			nm
Spectral Line Half Width	$\Delta\lambda$		I_F = 20 mA	30			nm
Dominant Wavelength	λ_D	*1	I_F = 20 mA	470	465	475	nm

* The condition of pulse current I_{FP} is 10ms pulse width, 10% duty cycle.
*1 Measurement tolerance is ±2 nm

(Note)

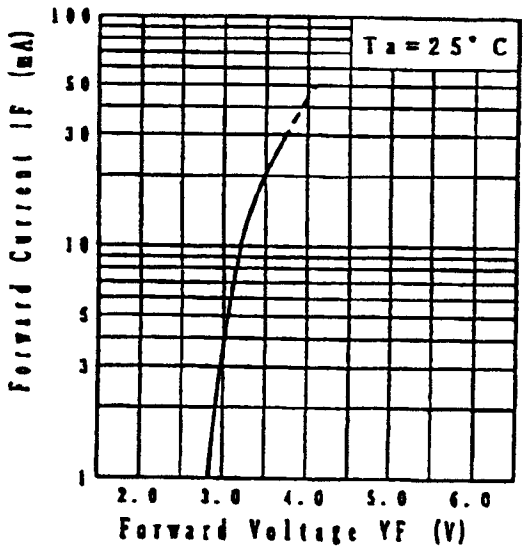
1. If you have any questions or take special operation, please contact to Panasonic office.
   (Example) ·Low current (below 1 mA DC)
   ·Pulse current (Pw≦10 ms, Duty≦10 %)
2. Lead material is iron, and its surface is dip-soldered.
3. Do not apply mechanical stress during soldering.
4. A blue LED is sensitive to static electricity and care should be fully taken in handling it. Particularly, when an overvoltage is applied, which exceeds the absolute maximum rating of the blue LED, its energy damages the LED. Therefore, take utmost proactive measures against static electricity and surge as to building an assembly line and handling the LED halfway the process.
   (1) Check the entire drive circuit including the power source. For example, a surge current, etc., generated at power-on/off should not exceed the absolute maximum rating of the LED. Also, insert an appropriate protective circuit into the LED drive circuit.
   (2) Beware of destruction by static electricity in handling the LED. As proactive measures against static electriciy, it is effective to earth your body (via 1MΩ), spread conductive mat on the floor, wear semiconductive work uniform and shoes, and use semiconductive containers. Also, be sure to earth the nose of a soldering iron. It is recommended to use an ionizer, etc., in the facility or environment where static electricity may be generated easily.

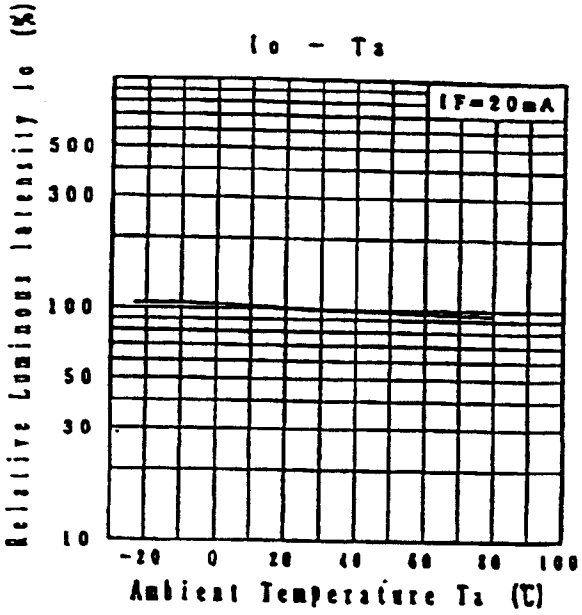
Apr. . 1997			

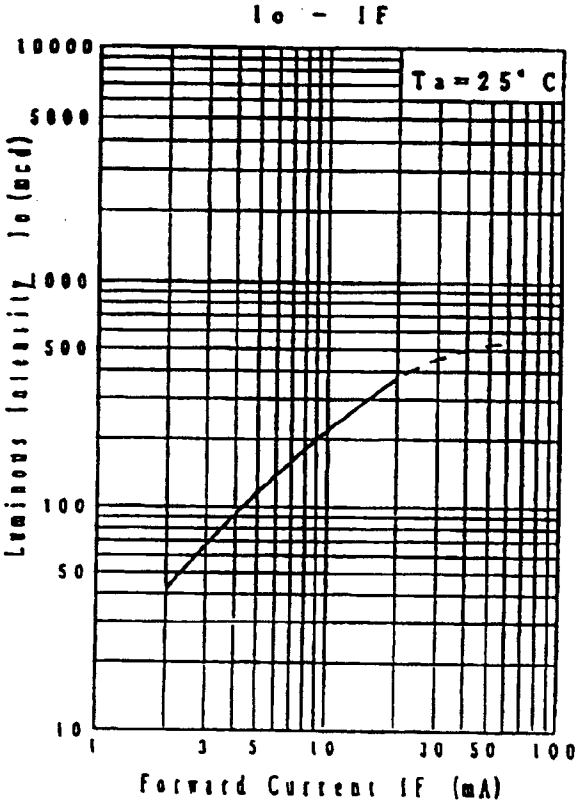
DEVELOPMENT SPECIFICATION

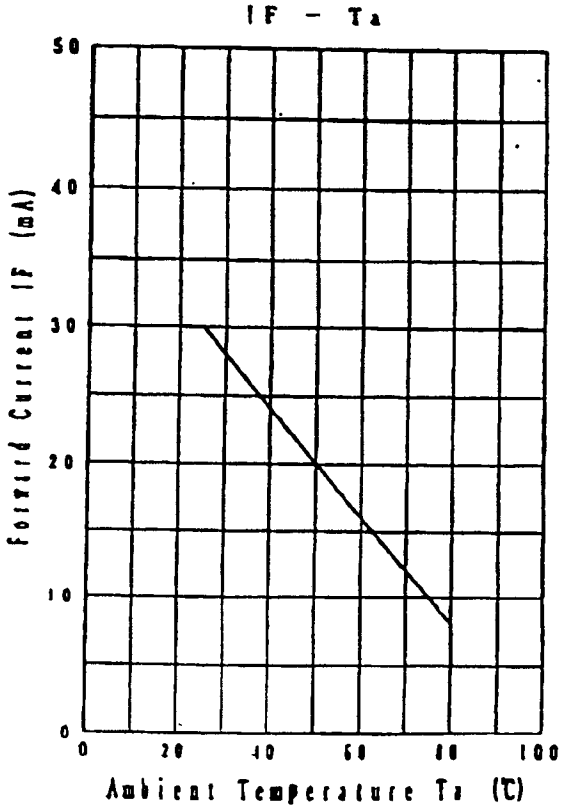
LNG995PFBW

This spec is "Target Spec", so it may be revised a part of it as time of establishment of "Regular Spec".







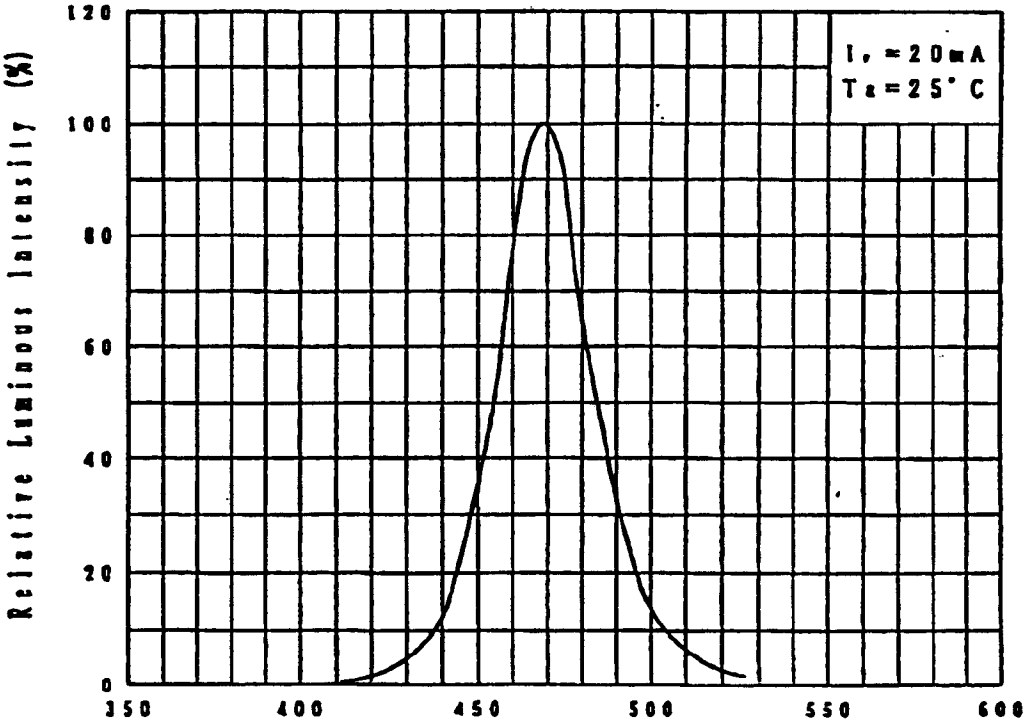


Mar. 4. 1997			

DEVELOPMENT SPECIFICATION

LNG995PFBW

Relative Luminous Intensity
Wavelength Characteristics



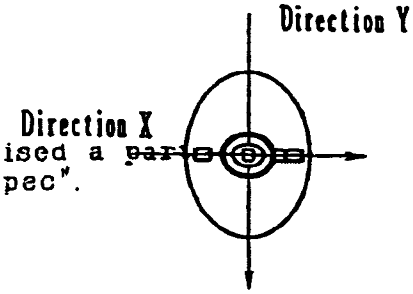
This spec is "Target Spec", so it may be revised a part of it as time of establishment of "Regular Spec".

Mar. 4. 1997			

DEVELOPMENT SPECIFICATION

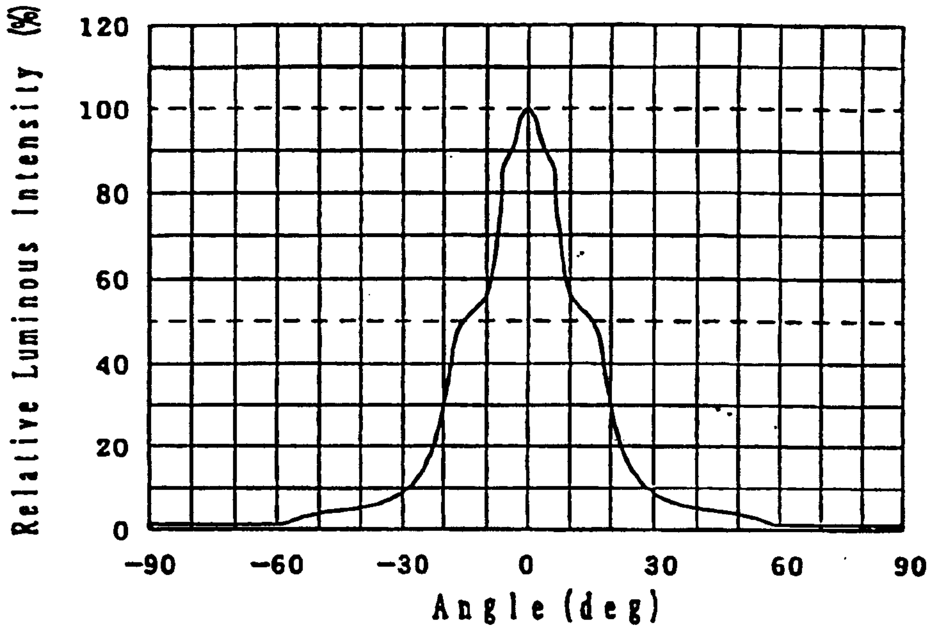
LNG995PFBW

Directive Characteristics

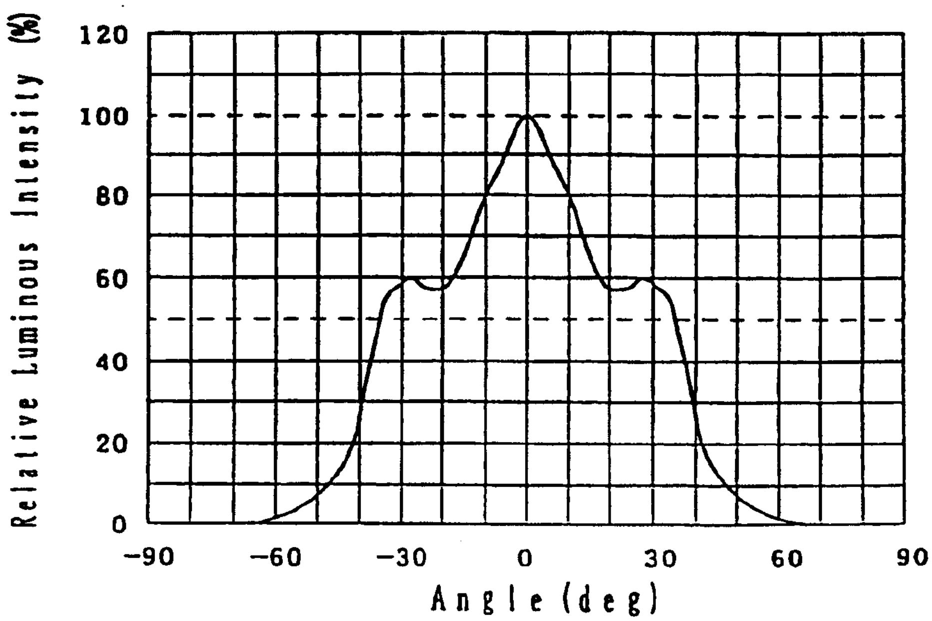


This spec is "Target Spec", so it may be revised a ~~part~~ of it as time of establishment of "Regular Spec".

Direction X

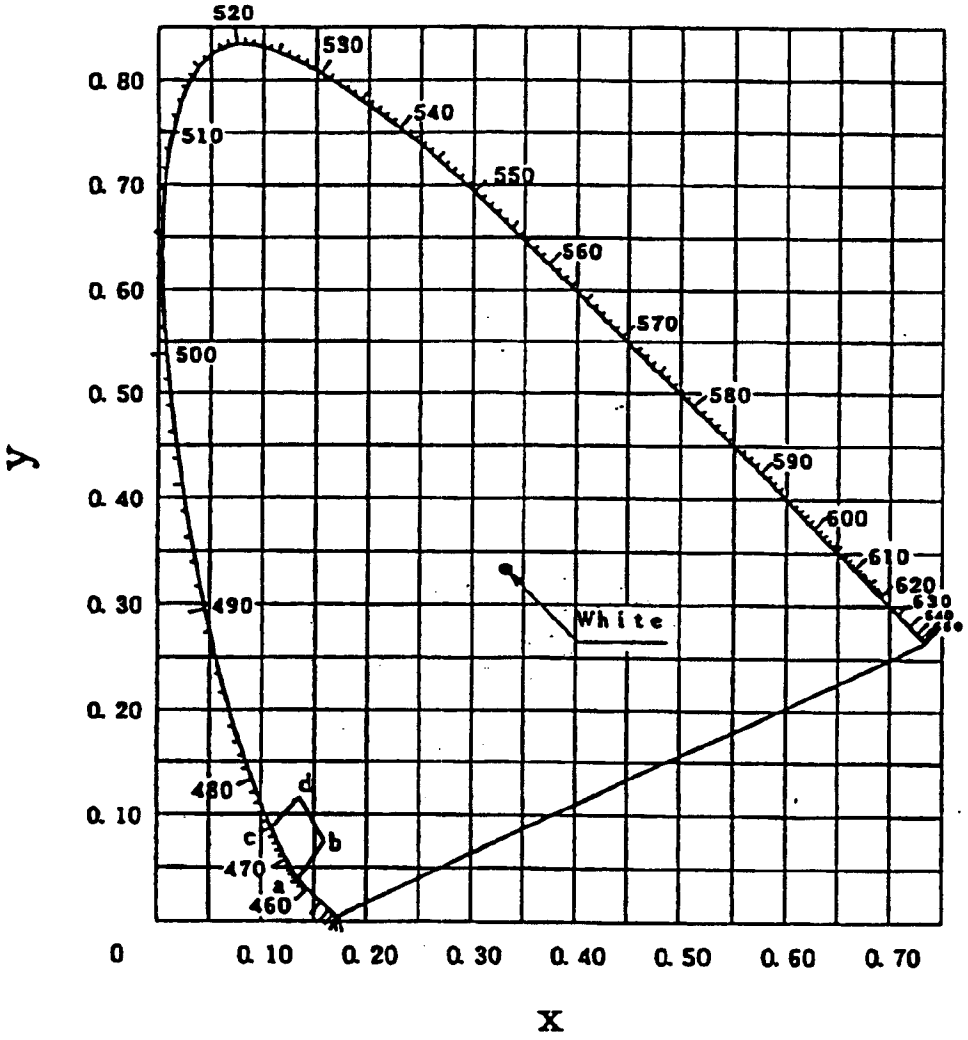


Direction Y



Mar. 4. 1997			

Chromaticity diagram



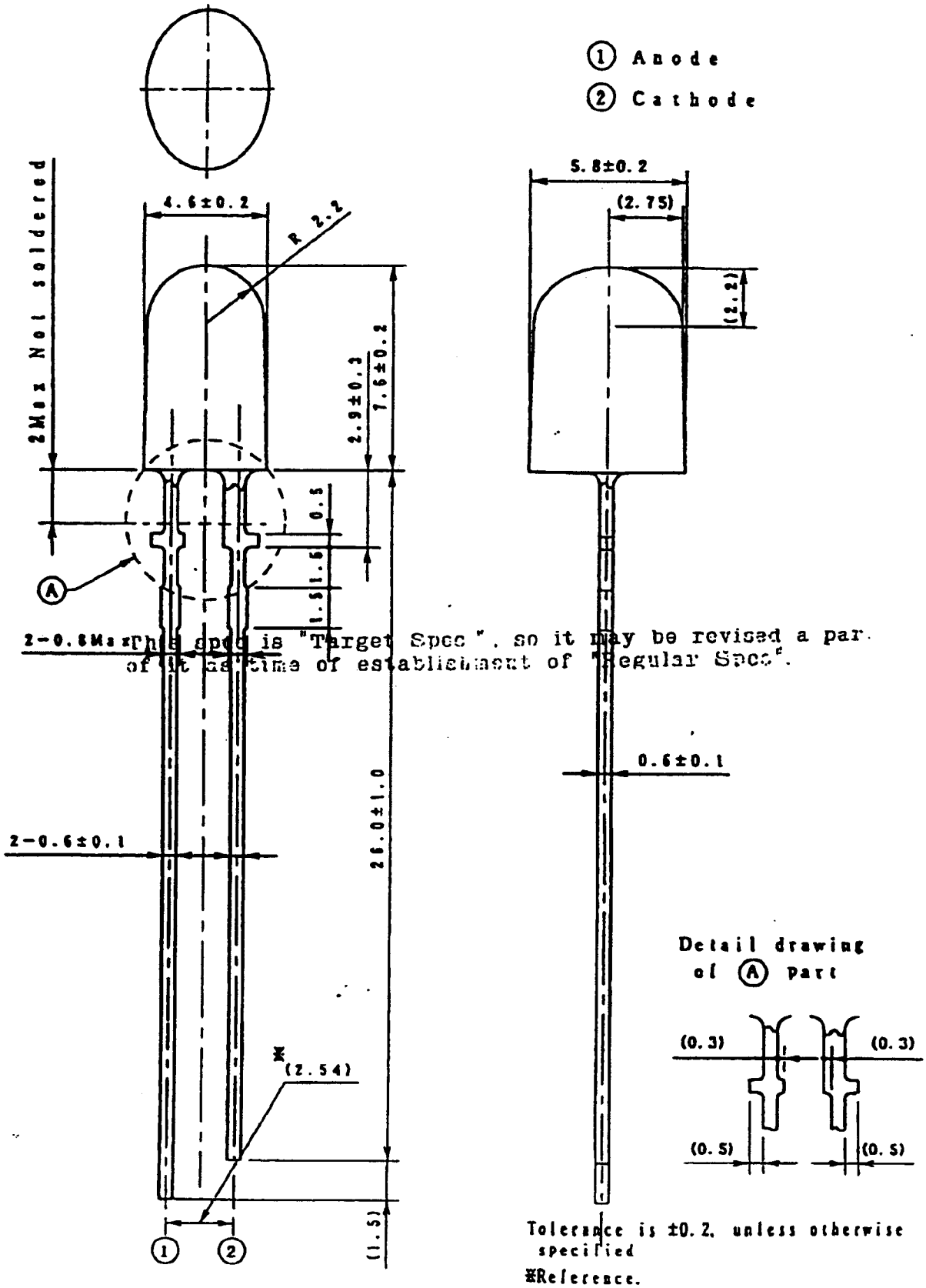
This spec is "Target Spec", so it may be revised a part of it as time of establishment of "Regular Spec".

Chromaticity coordinates

	a	b	c	d
x	0.136	0.159	0.110	0.136
y	0.040	0.075	0.087	0.116

DEVELOPMENT SPECIFICATION

LNG995PFBW



This spec is "Target Spec", so it may be revised a part of it as time of establishment of "Regular Spec".

Tolerance is ±0.2, unless otherwise specified

※Reference.

Mar. 4. 1997

Approved | Checked | Prepared

DEVELOPMENT SPECIFICATION

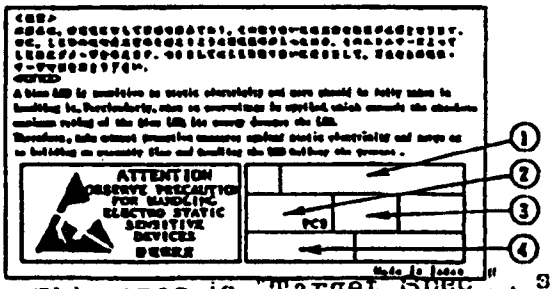
LNG995PFBW

1. Packing Division

1) Al laminate bag 500 pieces (105×225)
2) Packing (inner) 1000 pieces (110×235×57.5)
3) Packing (outer) 10000 pieces (238×573×120)

*1 Ranks can't be mixed in the inner case.
*2 Ranks can be mixed in the outer case.

2. Al laminate bag indication. (Label ①)

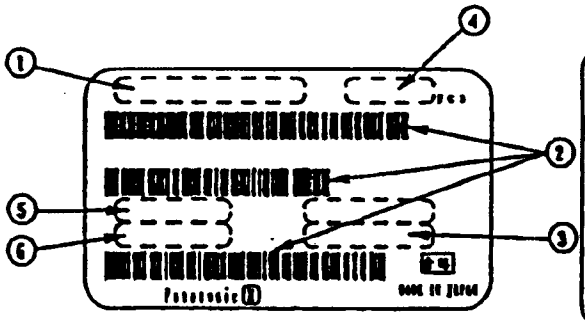


① —— Product No.
② —— Quantity
③ —— Rank
④ —— Date code

This indicated is only Al laminate bag.

This spec is "Target Spec". so it may be revised a part of it as time of establishment of "Regular Spec".

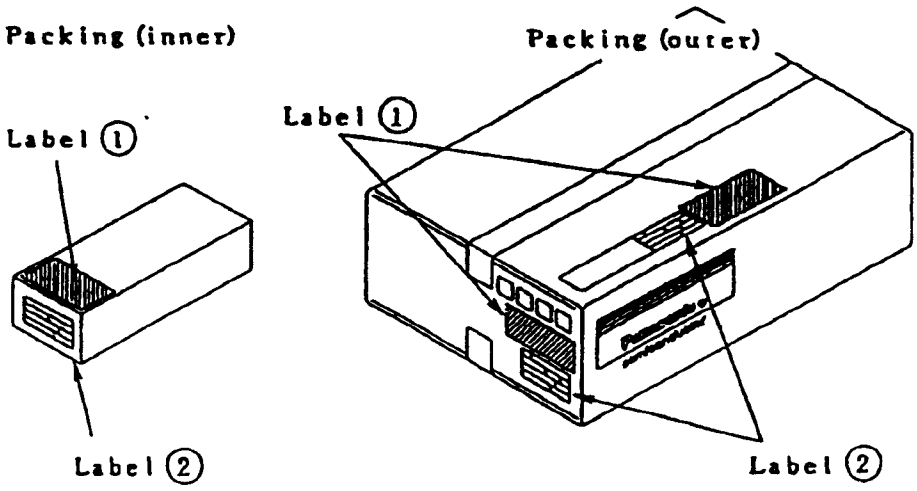
3. Label Items. (Label ②)



① —— Customer code
② —— Bar code symbol
③ —— Product No.
④ —— Quantity
⑤ —— Rank
⑥ —— Date code

Note.

1. Example of date code.
   Date code of "73" indicates March. 1997 (Date of Al laminate bag and case packing).
2. Ranks can be mixed in the outer case.



Mar. 4. 1997

Approved	Checked	Designed	DEVELOPMENT SPECIFICATION	
			LNG995PFBW	

Requests and Cautions for this is "Target Spec", so it may be revised a part of it as time of establishment of "Regular Spec".

1. An export permit needs to be obtained from the competent authorities of the Japanese Government if any of the products or technologies described in this document and controlled under the "Foreign Exchange and Foreign Trade Control Law" is to be exported or taken out of Japan.

2. The technical information described in this document is limited to showing representative characteristics and applied circuit examples of the products. It does not constitute the warranting of industrial property, the granting of relative rights, or the granting of any license.

3. The products described in this document are intended to be used for standard applications or general electronic equipment (such as office equipment, communications equipment, measuring instruments and household appliances).
   Consult our sales staff in advance for information on the following applications:
   - Special applications (such as for airplanes, aerospace, automobiles, traffic control equipment, combustion equipment, life support systems and safety devices) in which exceptional quality and reliability are required, or if the failure or malfunction of the products may directly jeopardize life or harm the human body.
   - Any applications other than the standard applications intended.

4. When designing your equipment, comply with the guaranteed values, in particular those of maximum rating, the range of operating power supply voltage and heat radiation characteristics. Otherwise, we will not to be liable for any defect which may arise later in the equipment.
   Even when the products are used within the guaranteed values, redundant design is recommended, so that such equipment may not violate relevant laws or regulations because of the function of our products.

5. When using products for which vacuum packing is required, observe the conditions (including shelf life and after-unpacking stand-by time) agreed upon when specification sheets are individually exchanged.

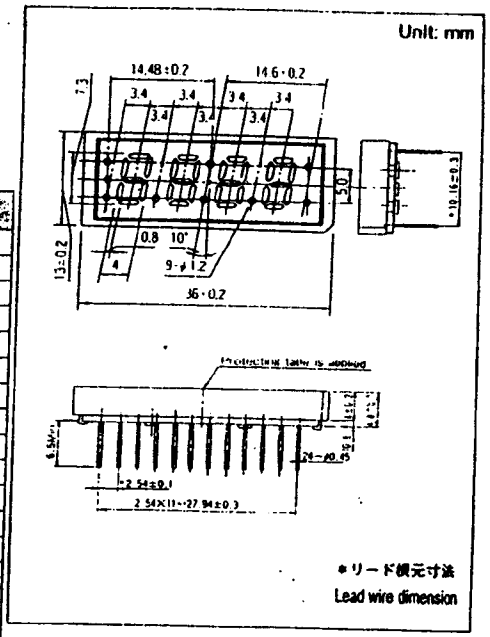
6. OTHERS
   For the doubts or necessity of change in this specification, mutual discussion will be made for the solution.

Not using the O. D. C and PBBOs in the LED's.

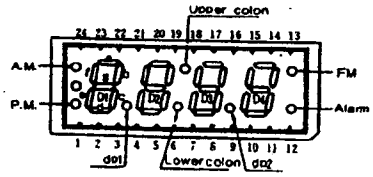
Mar. 5. 1997			

4 Digit 0.3inch Series

Type No.	Lighting Color
LN543RAN8	Red
LN543RKN8	Red
LN533GAN8	Green
LN543GKN8	Green



端子接続 Terminal Connection



PIN No.	Assignment (A)		Assignment (B)	
1	Cathode	PM	Anode	PM
2	Anode	Dig 1	Cathode	Dig 1
3	Cathode	d	Anode	d
4	Cathode	dp 1	Anode	dp 1
5	Anode	Dig 2	Cathode	Dig 2
6	Cathode	Lower colon	Anode	Lower colon
7	Cathode	Upper colon	Anode	Upper colon
8	Anode	Dig 3	Cathode	Dig 3
9	Cathode	dp 2	Anode	dp 2
10	Anode	Dig 4	Cathode	Dig 4
11	Cathode	e	Anode	e
12	Cathode	Alarm	Anode	Alarm
13	Anode	FM, Alarm	Cathode	FM, Alarm
14	Cathode	FM	Anode	FM
15	Cathode	a	Anode	a
16	Anode	dp 2	Cathode	dp 2
17	Anode	Lower Upper colon	Cathode	Lower Upper colon
18	Cathode	f	Anode	f
19	Cathode	b	Anode	b
20	Cathode	c	Anode	c
21	Anode	dp 1	Cathode	dp 1
22	Cathode	g	Anode	g
23	Cathode	AM	Anode	AM
24	Anode	AM, PM	Cathode	AM, PM

絶対最大定格 Absolute Maximum Ratings (Ta=25 °C)

Red	30	10	60	5	−25～+80	−30～+85
Green	30	10	60	5	−25～+80	−30～+85

★ I_{FP}の条件は、duty 10%, Pulse width 1 msec. The condition of I_{FP} is duty 10%, Pulse width 1 msec

電気的光学的特性 Electro-Optical Characteristics (Ta=25 °C)

LN543RAN8	Red	Anode	200	100	100	5	2.03	2.8	700	100	10	10	5
LN543RKN8	Red	Cathode	200	100	100	5	2.03	2.8	700	100	10	10	5
LN543GAN8	Green	Anode	200	80	80	10	2.03	2.8	565	30	10	10	5
LN543GKN8	Green	Cathode	200	80	80	10	2.03	2.8	565	30	10	10	5
Unit.	—	——	μcd	μcd	μcd	mA	V	V	nm	nm	mA	μA	V