



VICTORY SALES ENGINEERING CO.
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承認書

SPECIFICATION FOR APPROVAL
Issue Date: Jan 31 2011


客戶(CUSTOMER): 升力科技有限公司

產品(PRODUCT): 5mm Round Bi-Color LED

型號(MODEL): VT 5J47

料號(CODE): 1320R0200043000

日期 (ISSUE DATE): Jan 31 2011

				
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威質達有限公司

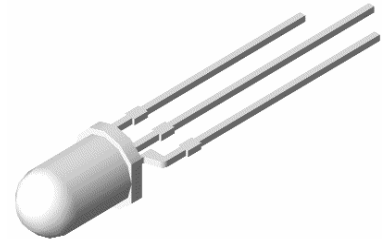
5mm Bi-Color LED Common Cathode

VT 5J47

Description

The VT 5J47 is 5mm Bi-Color LED Lamp. The chip material used in RED & GREEN emitting is high efficiency GaP & GaAsP/GaP with brilliant light output. It has high reliability lead based package and available in full selection of colors, high intensity under low current condition

Other selection included Common Cathode or Common Anode and lead pitch is 2.54mm.





Applications

- TV Set
- Monitor
- Telephone
- Computer



Electronic Optical Characteristics (at 20mA):

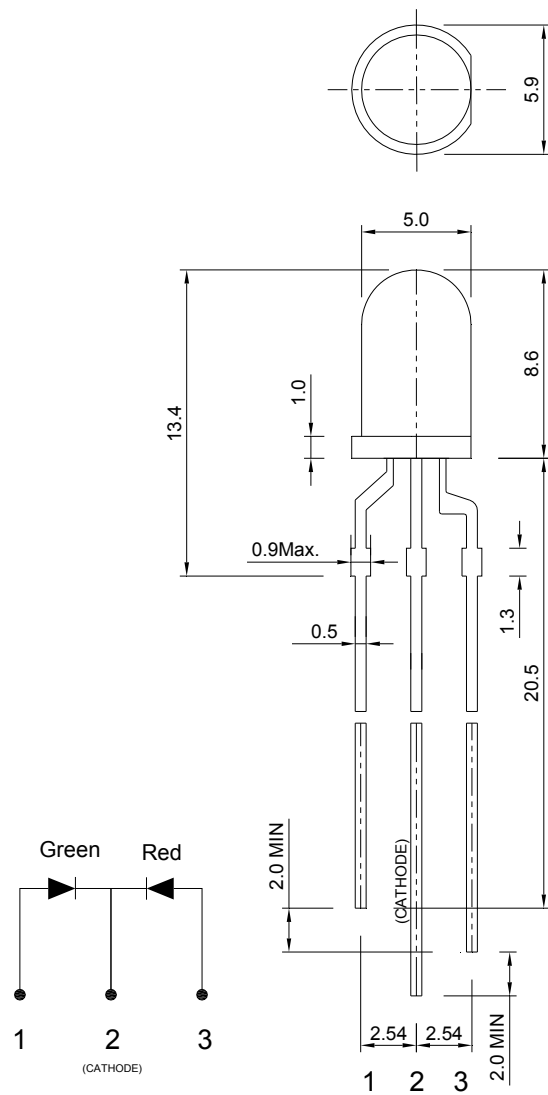
Part Number	Emitted Color	λ (nm)		Iv(mcd)		VF(Volt)		View Angle	Lens
		λ d	λ p	Min	Typ.	Typ.	Max.		
VT 5J47	Yellow-green 	571	570	4.5	10	2.0	2.4	60	White Diffuse
	Red 	625	635	7.1	12	2.0	2.4		

Absolute Maximum Ratings (at Ta=25°C)

Color	P _D (mW)	I _{FP} (mA)	I _F (mA)	T _{sol} (°C)	I _R (uA) @VR=5V	T _{opr} (°C)	T _{stg} (°C)
Yellow-green	60	100	30	260+/-5 for 5 sec	10	-40~+85	-40~+90
Red	60	100	30		10	-40~+85	-40~+90

Note: Please take note the Absolute Maximum Rating values. Any operation beyond the specify ratings in this table will result degradation of LED life- span and may cause LED to fail.

* I_{FP}: Peak Forward Current under 1/10 duty, 1KHz condition

Package Dimension:


unit: mm

Notes:

1. All dimensions are millimeters.
2. Tolerance is ± 0.2 mm unless otherwise specified.
3. Specifications are subject to change without notice.

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The following sample(s) was/were submitted and identified by/on behalf of the client as :

Sample Description : DIP ARRAY LED
Style/Item No. : VT XXXX / VF XXXX / VA XXXX
Sample Receiving Date : 2009/06/02
Testing Period : 2009/06/02 TO 2009/06/08

=====
Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.
Test Method : With reference to IEC 62321: 2008 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.
(1) Determination of Cadmium by ICP-AES.
(2) Determination of Lead by ICP-AES.
(3) Determination of Mercury by ICP-AES.
(4) Determination of Hexavalent Chromium by UV/Vis Spectrometry.
(5) Determination of Hexavalent Chromium by Spot test / boiling water extraction Method.
(6) Determination of PBB and PBDE by GC/MS.
Test Result(s) : Please refer to next page(s).

Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

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Test results by chemical method (Unit: mg/kg)

Test Item (s):	Method (Refer to)	Result		MDL
		No.1	No.2	
Cadmium (Cd)	(1)	n.d.	n.d.	2
Lead (Pb)	(2)	27	n.d.	2
Mercury (Hg)	(3)	n.d.	n.d.	2
Hexavalent Chromium Cr(VI) by alkaline extraction	(4)	n.d.	---	2
Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	(5)	---	Negative	See Note 4
Sum of PBBs	(6)	n.d.	n.d.	-
Monobromobiphenyl		n.d.	n.d.	5
Dibromobiphenyl		n.d.	n.d.	5
Tribromobiphenyl		n.d.	n.d.	5
Tetrabromobiphenyl		n.d.	n.d.	5
Pentabromobiphenyl		n.d.	n.d.	5
Hexabromobiphenyl		n.d.	n.d.	5
Heptabromobiphenyl		n.d.	n.d.	5
Octabromobiphenyl		n.d.	n.d.	5
Nonabromobiphenyl		n.d.	n.d.	5
Decabromobiphenyl		n.d.	n.d.	5
Sum of PBDEs		n.d.	n.d.	-
Monobromodiphenyl ether		n.d.	n.d.	5
Dibromodiphenyl ether		n.d.	n.d.	5
Tribromodiphenyl ether		n.d.	n.d.	5
Tetrabromodiphenyl ether		n.d.	n.d.	5
Pentabromodiphenyl ether		n.d.	n.d.	5
Hexabromodiphenyl ether		n.d.	n.d.	5
Heptabromodiphenyl ether		n.d.	n.d.	5
Octabromodiphenyl ether		n.d.	n.d.	5
Nonabromodiphenyl ether	n.d.	n.d.	5	
Decabromodiphenyl ether	n.d.	n.d.	5	

TEST PART DESCRIPTION:

NO.1 : MIXED TRANSPARENT, TRANSLUCENT, TRANSPARENT-RED, TRANSPARENT-YELLOW, TRANSPARENT-BLUE, TRANSPARENT-GREEN, GREEN BODY

NO.2 : SILVER COLORED METAL PIN (INCLUDING THE PLATING LAYER)

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Note : 1. mg/kg = ppm ; 0.1wt% = 1000ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. Spot-test:

Negative = Absence of Cr(VI) coating / surface layer,

Positive = Presence of Cr(VI) coating / surface layer;

(The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed.)

Boiling-water-extraction:

Negative = Absence of Cr(VI) coating / surface layer.

Positive = Presence of Cr(VI) coating / surface layer;

the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

5. "-" = Not Regulated

6. "---" = Not Conducted

7. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing.
The above result(s) was/were only given as the informality value.

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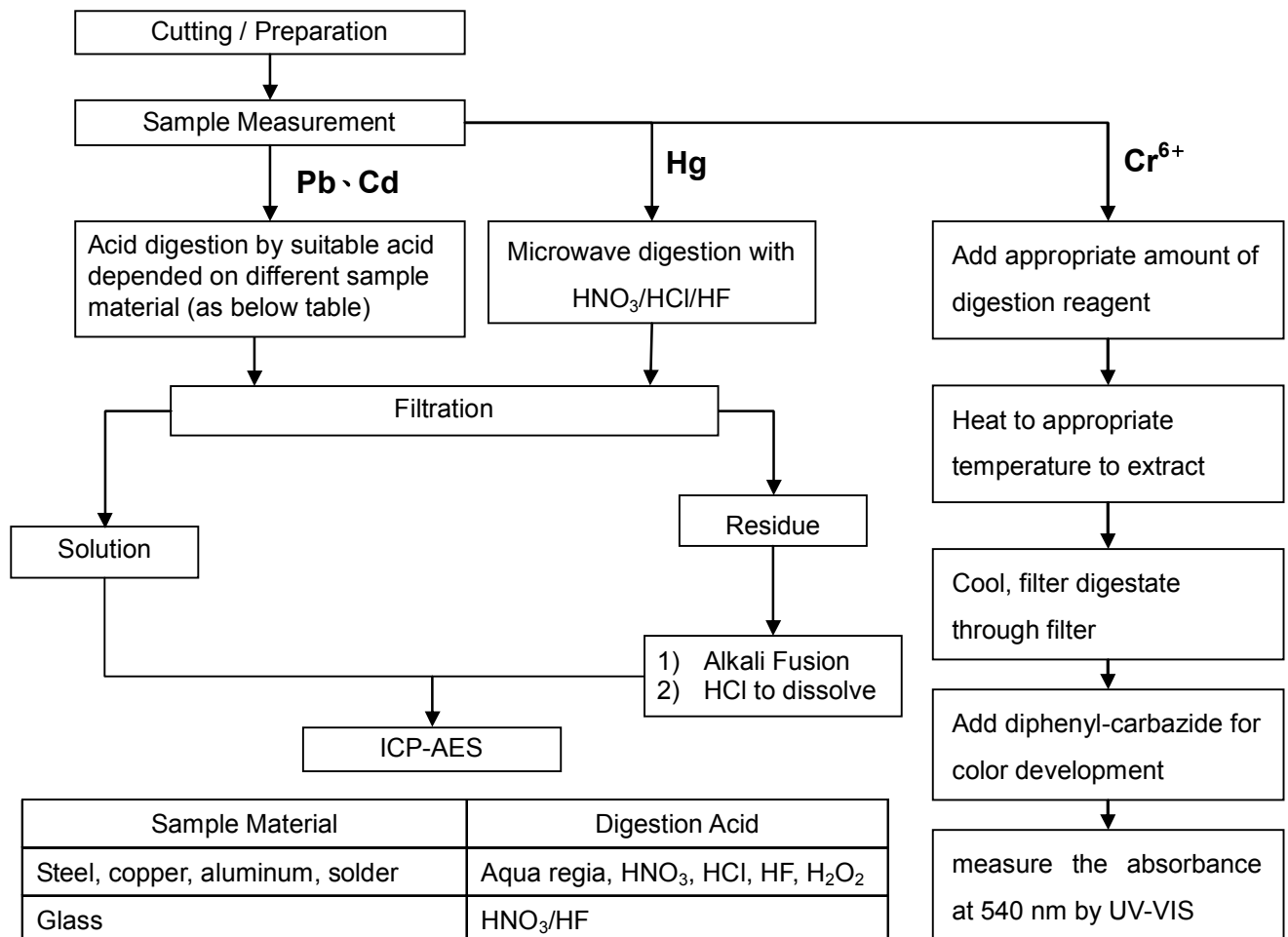
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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion

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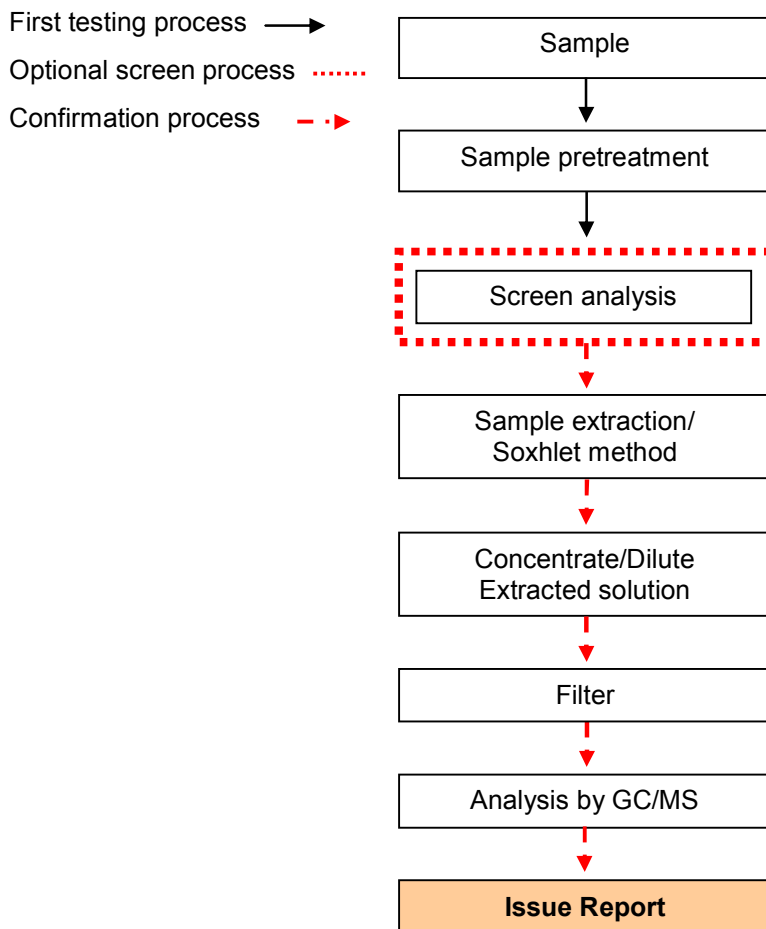
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PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Shinjyh Chen



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NO.1



NO.2



** End of Report **

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