

**Inolux Technologies 1.2" 5x7 Dot Matrix Display
HDMT57120 Series**

Official Product	HDMT57120 Series	Customer Part No.		Data Sheet No.
	*****	*****		HDMT57120 Series
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DISCLAIMER.....	3
ORDERABLE INFORMATION.....	4
FEATURES.....	5
SCHEMATIC DRAWING.....	6
PRODUCT CHARACTERISTIC	8
ABSOLUTE MAXIMUM RATING.....	8
ELECTRICAL AND OPTICAL CHARACTERISTIC.....	9
CHARACTERISTIC CURVES FOR UB.....	ERROR! BOOKMARK NOT DEFINED.
CHARACTERISTIC CURVES FOR UTG.....	9
CHARACTERISTIC CURVES FOR UYG.....	11
CHARACTERISTIC CURVES FOR UY.....	12
CHARACTERISTIC CURVES FOR UA.....	ERROR! BOOKMARK NOT DEFINED.
CHARACTERISTIC CURVES FOR UR.....	13
CHARACTERISTIC CURVES FOR USR.....	14
REFLOW SOLDERING.....	15
SOLDERING IRON.....	15
REWORK.....	15
REVISION HISTORY.....	16

Official Product	HDMT57120 Series	Customer Part No.		Data Sheet No.
	*****	*****		HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0	Page 2/17

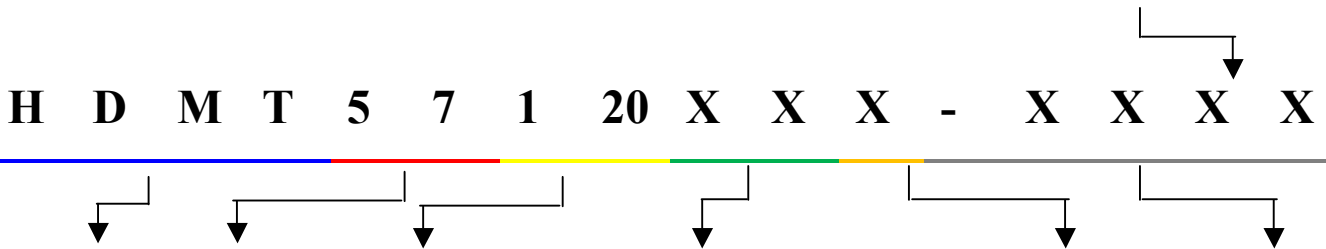
DISCLAIMER

- The information contained herein is presented only as a guide for the applications of our products.

No responsibility is assumed by INOLUX for any infringements of intellectual property or other rights of the third parties which may result from its use.

- Inolux is continually effort to improve the quality of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing INOLUX products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such INOLUX products cause loss of human life, bodily injury or damage to property.
- The INOLUX products listed in this document are intended for usage in general electronics (computer, personal equipment, office equipment, industrial robotics, domestic, etc...) These products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury.
- In developing your designs, please ensure that INOLUX products are used within specified operating ranges as set forth in the most recent INOLUX products specifications.
- Also, please keep in mind the precautions listed in this document.

Official Product	HDMT57120 Series	Customer Part No.		Data Sheet No.
	*****	*****		HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0	Page 3/17

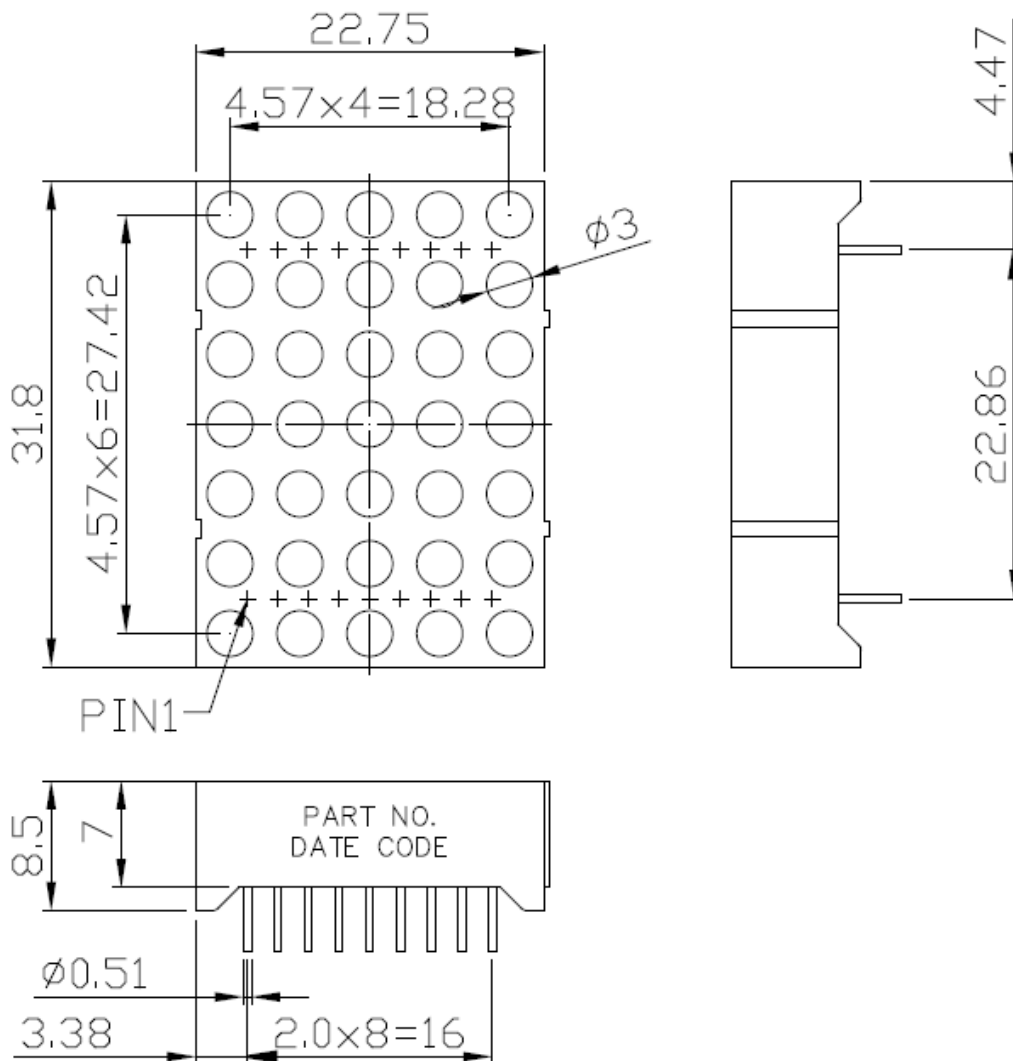
Orderable Information


Series Name	Matrix Type	Matrix Height	Color Code	Polarity	Customer Code
HDMT H: Inolux Technologies DMT: Dot Matrix	57: 5x7 Dot Matrix Display	120: 1.2" Matrix Height	UTG: 525nm InGaN True Green UYG: 570nm AllnGaP Yellow Green UY: 590nm AllnGaP Yellow USRUYG: 639nm AllnGaP Super Red/ 570nm AllnGaP Yellow Green URUYG: 625nm AllnGaP Hyper Red/ 570nm AllnGaP Yellow Green	A: Anode Column Cathode Row C: Cathode Column Anode Row	XXXX: Customer specific code

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 4/17

Features

- 1.2" (30.42mm) Matrix Height
- 5x7 Array Type
- Gray Face , White Segment
- RoHS Compliant, Pb Free

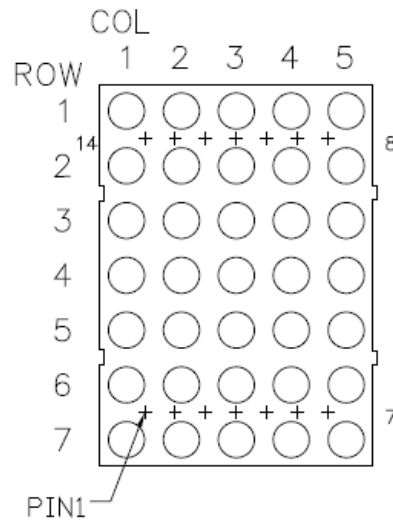


Official Product	HDMT57120 Series	Customer Part No.		Data Sheet No.
	*****	*****		HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0	Page 5/17

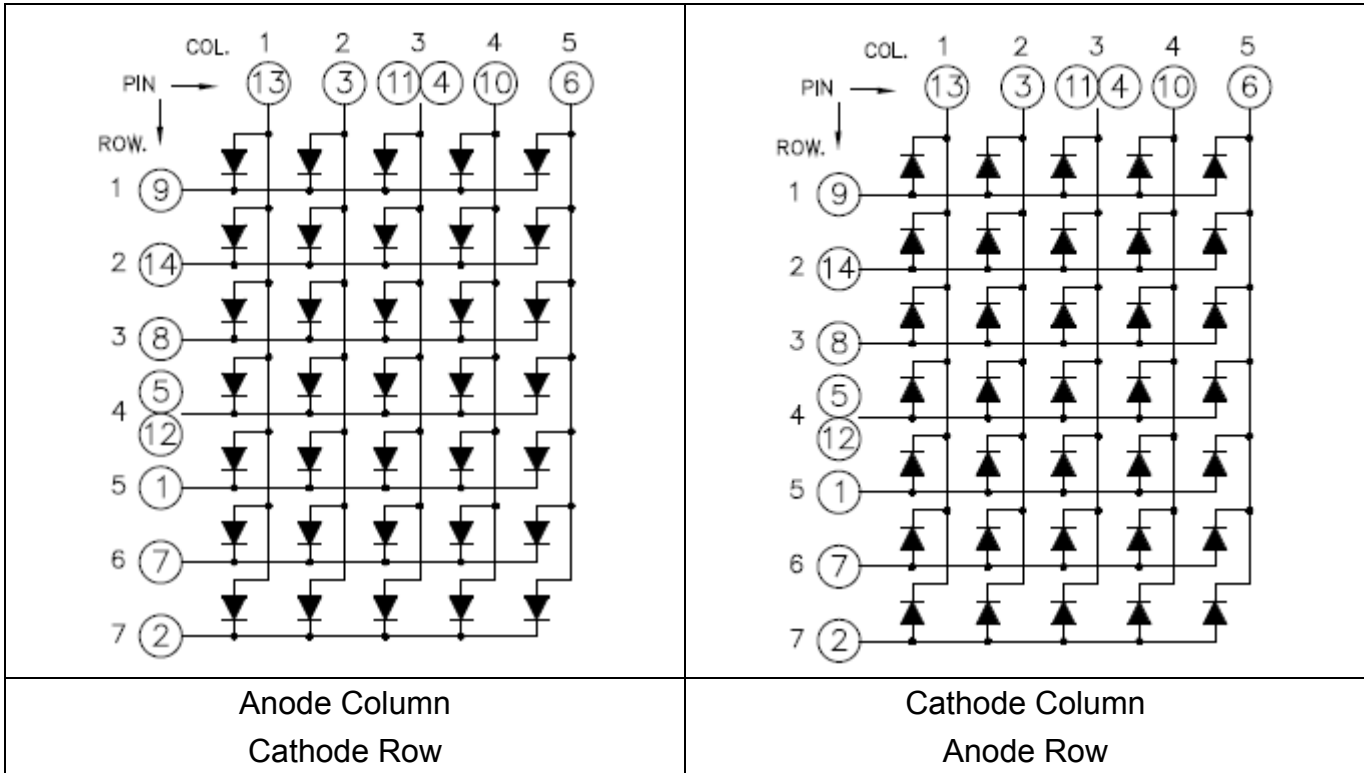
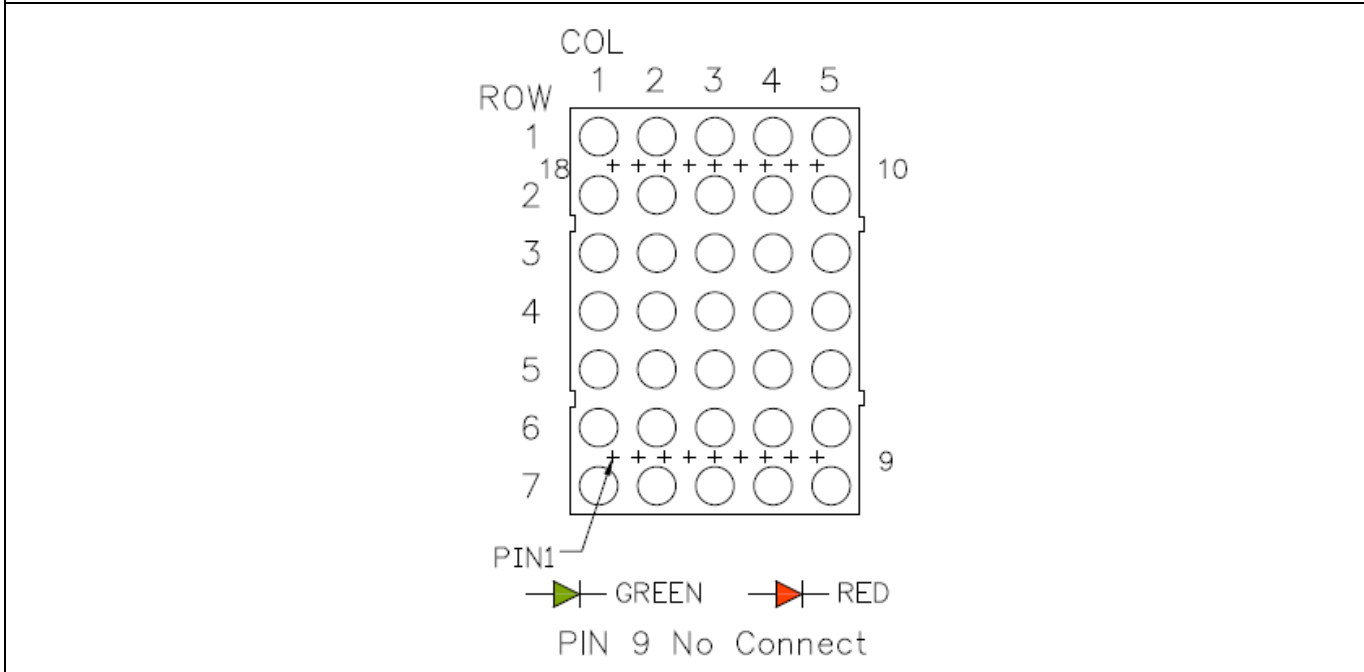
Note: Dimension is in millimeters. Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.

Schematic Drawing

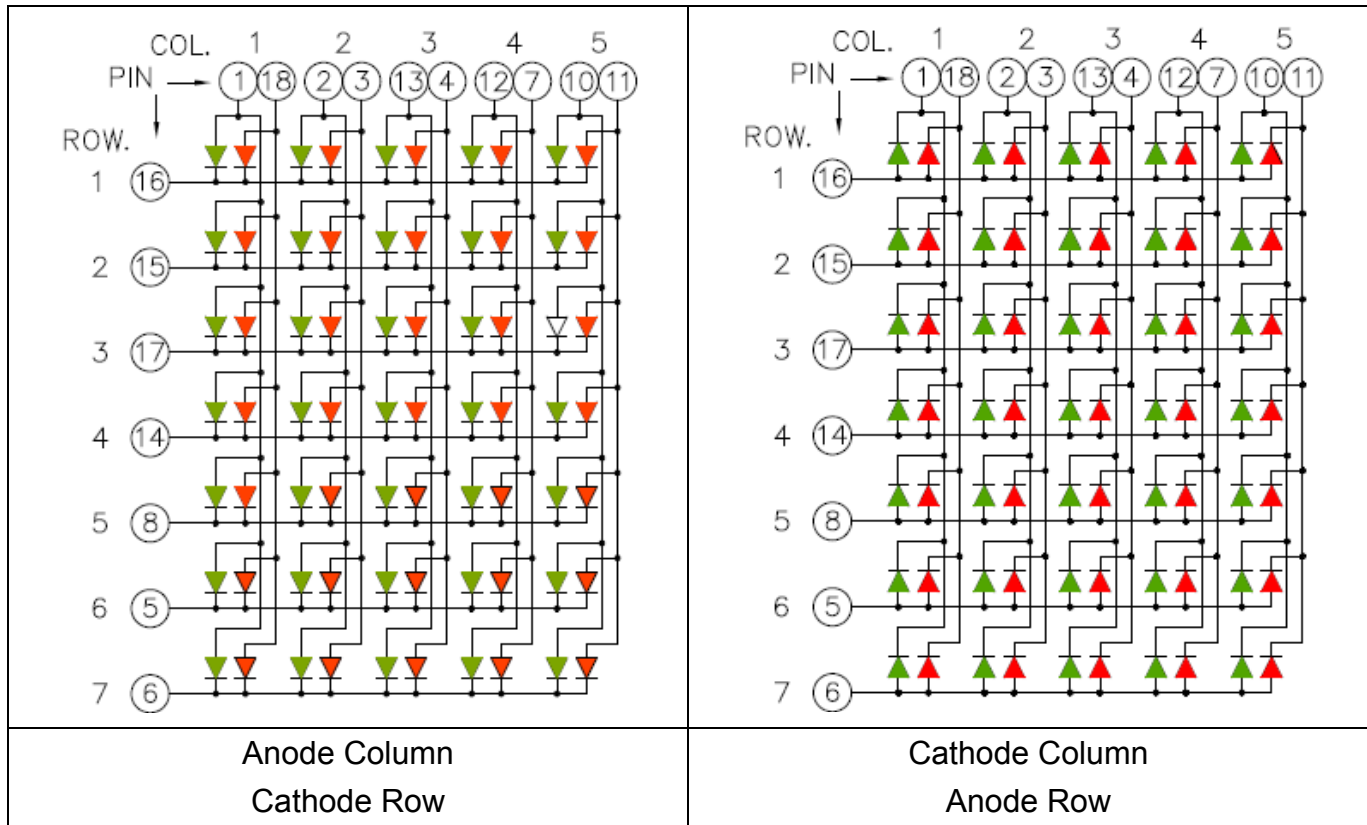
Single Color



Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 6/17


Bi-Color


Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 7/17



Product Characteristic

Absolute Maximum Rating

($T_a = 25^\circ\text{C}$)

Product	Emission Color	P_{AD} (mW)	I_{AF} (mA)	I_{PF} (mA)	V_R (V)	T_{OP} ($^\circ\text{C}$)	T_{ST} ($^\circ\text{C}$)	Derate From 25 $^\circ\text{C}$ (mA/ $^\circ\text{C}$)
HDMT57120UTGA/ HDMT57120UTGC	True Green	120	30	100	5	-25 ~ +85	-25 ~ +85	0.3
HDMT57120UYGA/ HDMT57120UYGC	Yellow Green	85	30	120	5	-25 ~ +85	-25 ~ +85	0.42
HDMT57120UYA/ HDMT57120UYC	Yellow	70	25	90	5	-25 ~ +85	-25 ~ +85	0.28
HDMT57120USRUYGA/ HDMT57120USRUYGC	Super Red	70	25	90	5	-25 ~ +85	-25 ~ +85	0.33

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 8/17

	Yellow Green	85	30	120	5	-25 ~ +85	-25 ~ +85	0.42
HDMT57120URUYGA/ HDMT57120URUYGC	Hyper Red	70	25	90	5	-25 ~ +85	-25 ~ +85	0.33
	Yellow Green	85	30	120	5	-25 ~ +85	-25 ~ +85	0.42

Electrical and Optical Characteristic

 (T_a= 25°C)

Product	Emission Color	I _F (mA)	V _F (V)		λ (nm)		I _V (mcd)	I _R (μA)
			Typ.	Max.	λ _d	Δλ	Typ.	Max
HDMT57120UTGA/ HDMT57120UTGC	True Green	20	3.2	4.0	525	30	160	10 (V _R =8V)
HDMT57120UYGA/ HDMT57120UYGC	Yellow Green	20	2.1	2.6	571	20	25	10 (V _R =5V)
HDMT57120UYA/ HDMT57120UYC	Yellow	20	2.0	2.6	590	20	60	10 (V _R =5V)
HDMT57120USRUYGA/ HDMT57120USRUYGC	Super Red	20	2.0	2.6	639	20	35	10 (V _R =5V)
	Yellow Green	20	2.1	2.6	571	20	25	10 (V _R =5V)
HDMT57120URUYGA/ HDMT57120URUYGC	Hyper Red	20	2.0	2.6	625	20	60	10 (V _R =5V)
	Yellow Green	20	2.1	2.6	571	20	25	10 (V _R =5V)

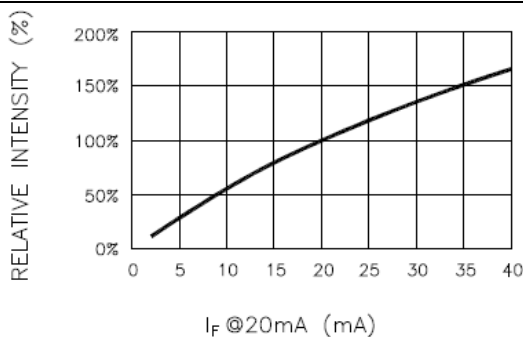
Characteristic Curves for UTG


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

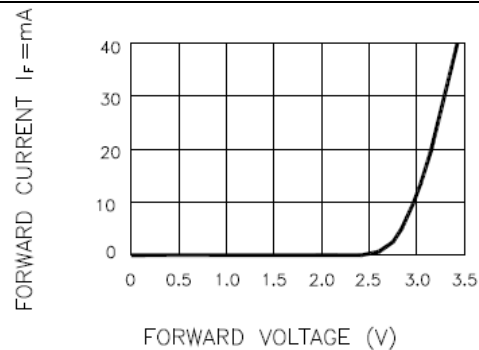


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 9/17

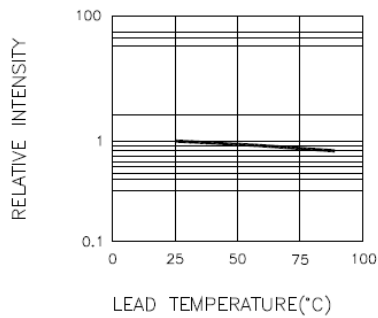


Fig.3 RELATIVE INTENSITY VS.LEAD TEMPERATURE
(PULSED 20 mA; 300us PULSE,10ms PERIOD)

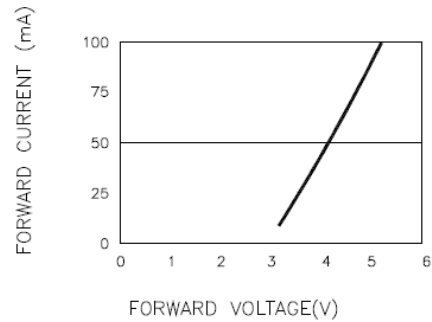


Fig.4 PEAK FORWARD VOLTAGE VS.FORWARD
(100us TEST PULSE, 1% DUTY CYCLE)

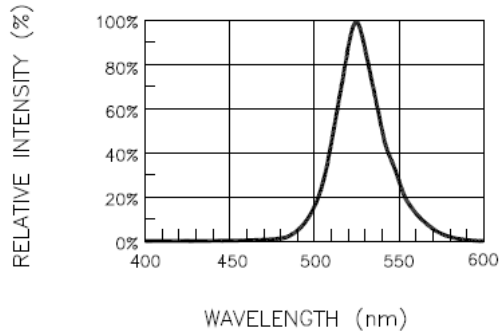


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

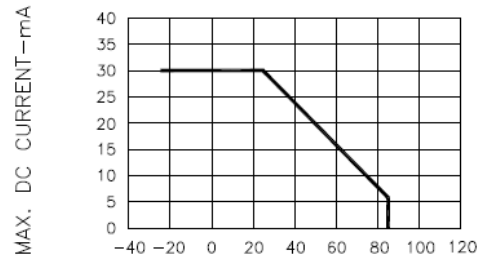


Fig.6 MAX. ALLOWABLE DC CURRENT
VS. AMBIENT TEMPERATURE

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 10/17

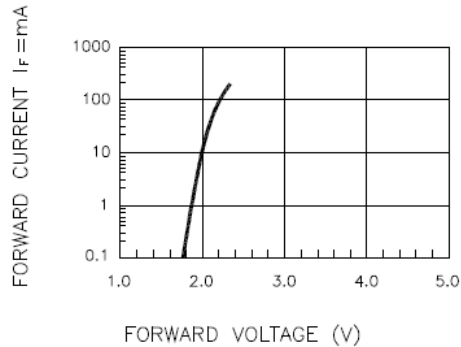
Characteristic Curves for UYG


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

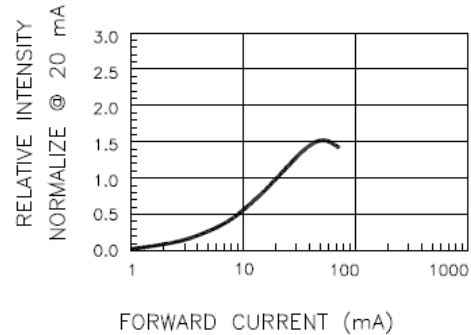


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

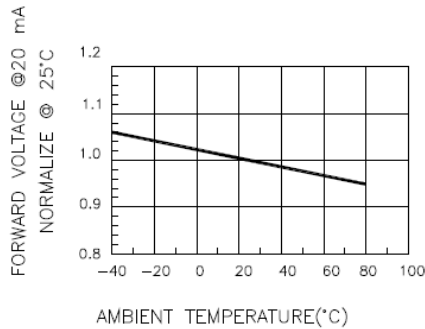


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

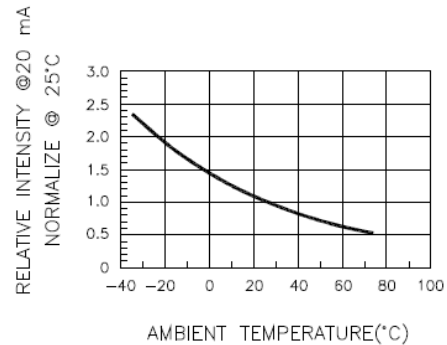


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

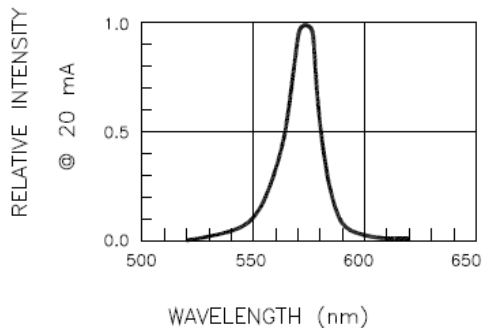


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

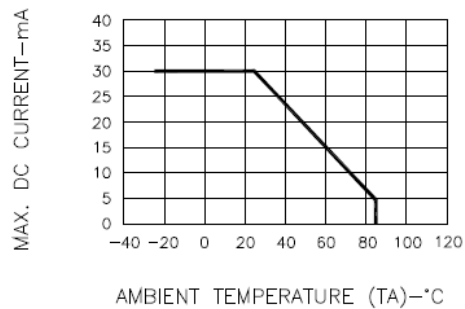


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 11/17

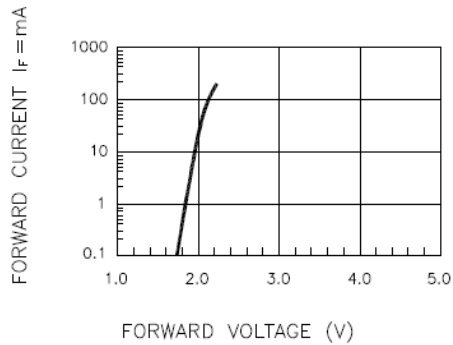
Characteristic Curves for UY


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

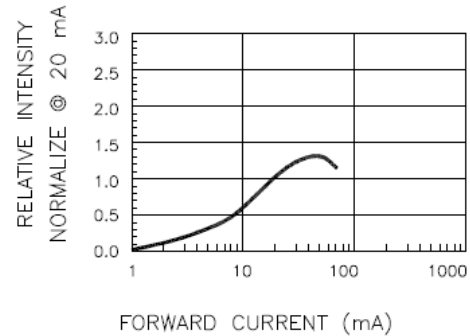


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

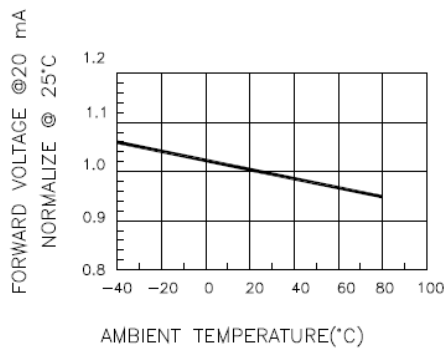


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

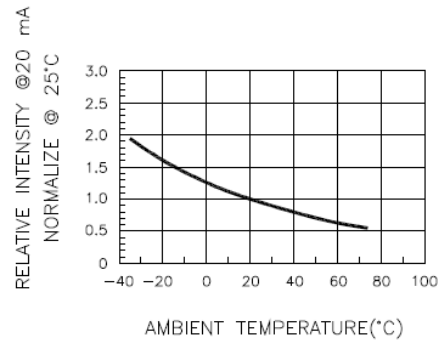


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

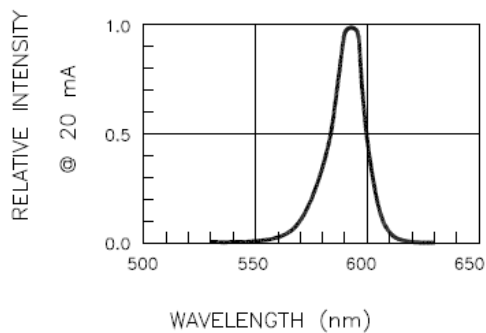


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

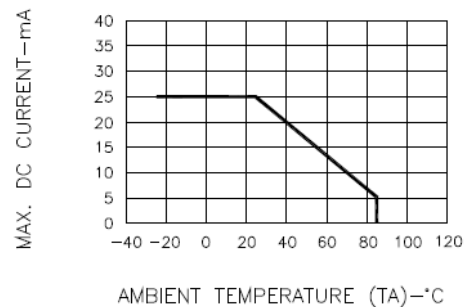


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	May 08, 2013	Version of 1.0	Page 12/17

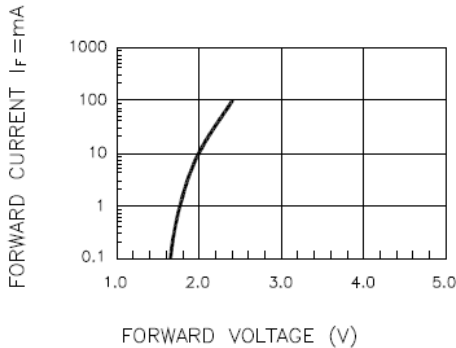
Characteristic Curves for UR


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

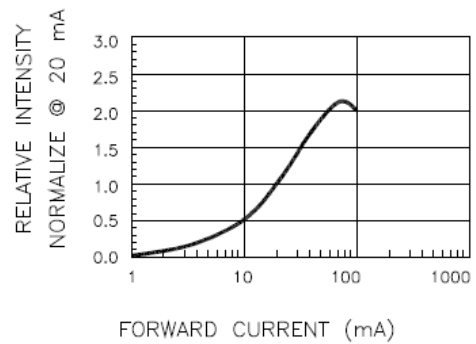


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

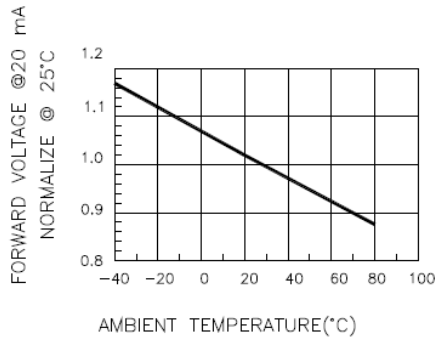


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

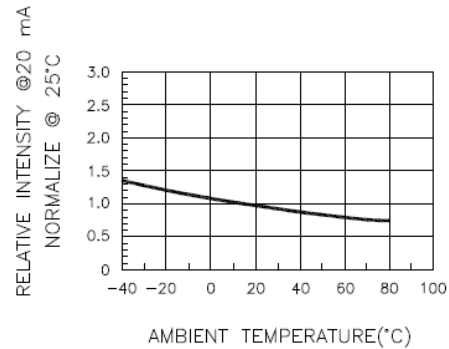


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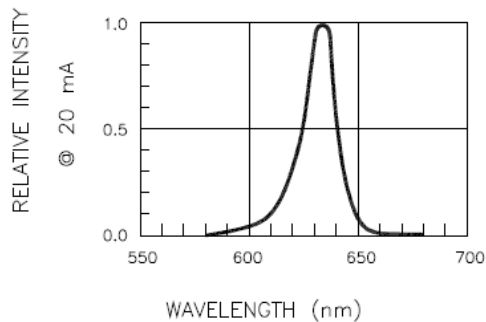


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

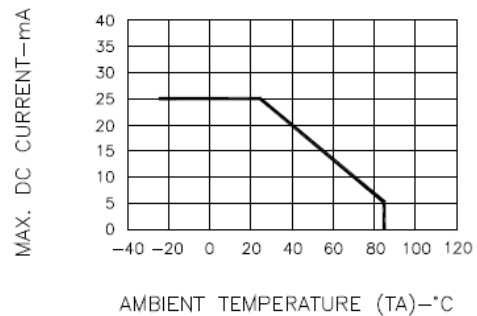


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	May 08, 2013	Version of 1.0	Page 13/17

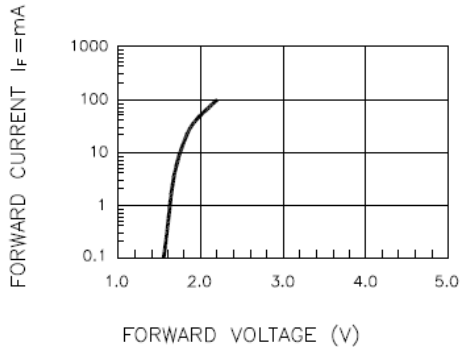
Characteristic Curves for USR


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

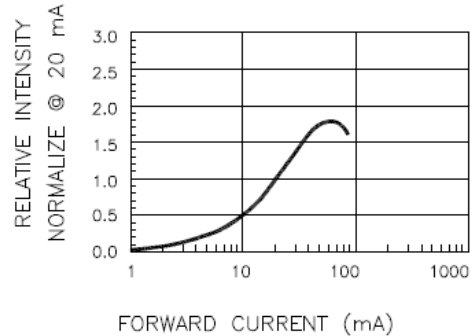


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

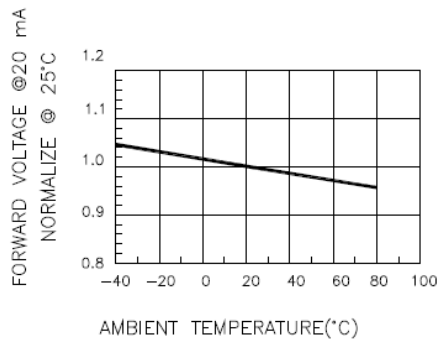


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

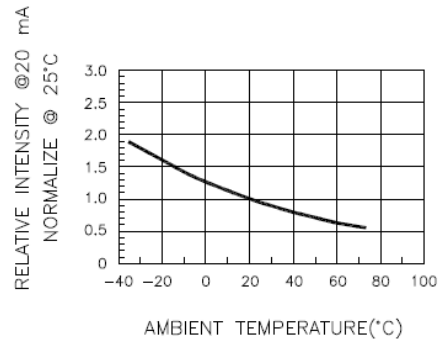


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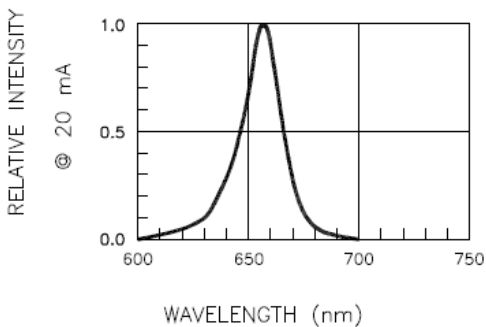


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

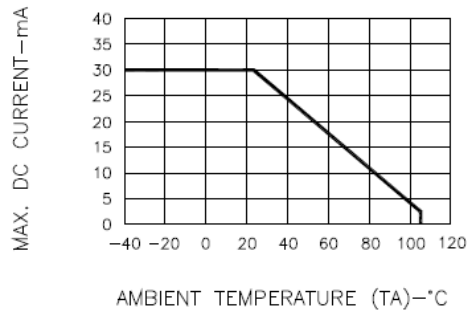
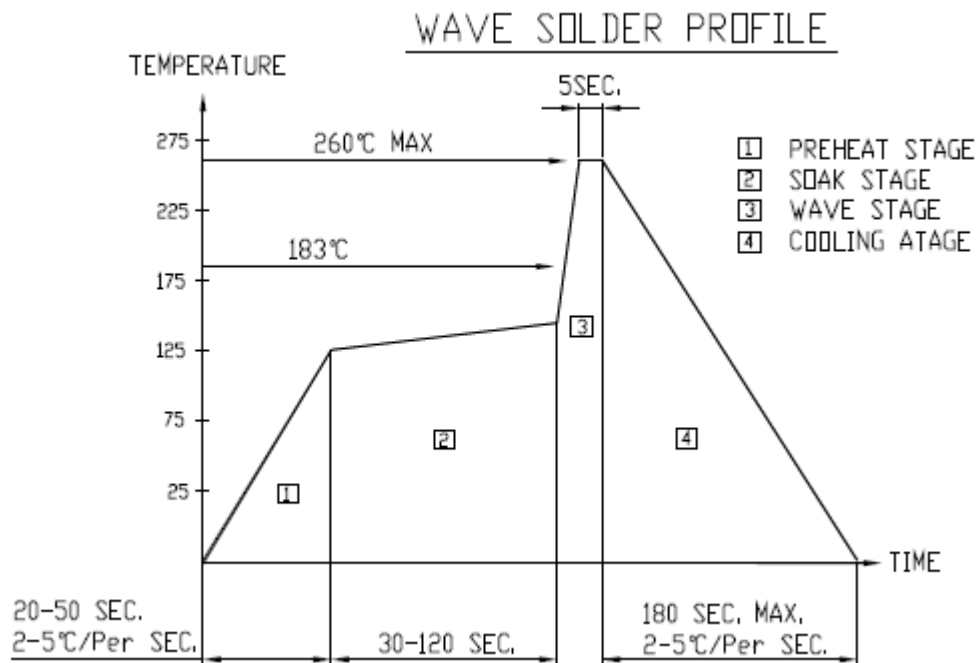


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Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	May 08, 2013	Version of 1.0	Page 14/17

Reflow Soldering



Soldering Iron

Basic Spec is ≤ 4 sec. when 260°C (+10°C → -1 second). Power dissipation of Iron should be less than 15W. Surface temperature should be under 230°C

Rework

Rework should be completed within 4 second under 245°C

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 15/17

Revision History

Changes since last revision	Page	Version No.	Revision Date
Initial Release for HDMT57120		1.0	05-08-2013

Official Product	HDMT57120 Series	Customer Part No.	Data Sheet No.
	*****	*****	HDMT57120 Series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 08, 2013	Version of 1.0
			Page 16/17