

Harvatek 9.6*5.6*9.0mm Transmissive Sensor
HV-YC0026H-MP9BA

Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 1/10

DISCLAIMER

HARVATEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. HARVATEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

LIFE SUPPORT POLICY

HARVATEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of the President of HARVATEK or HARVATEK INTERNATIONAL. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 2/10

Compliance and Certification

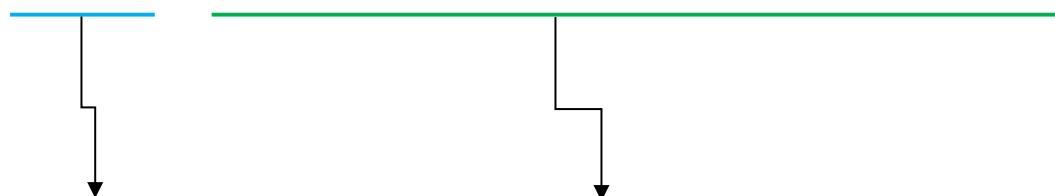
ISO9002, QS9000 and ISO14001 Certified

RoHS Compliant



Orderable Information

H V - Y C 0 0 2 6 H - M P 9 B A



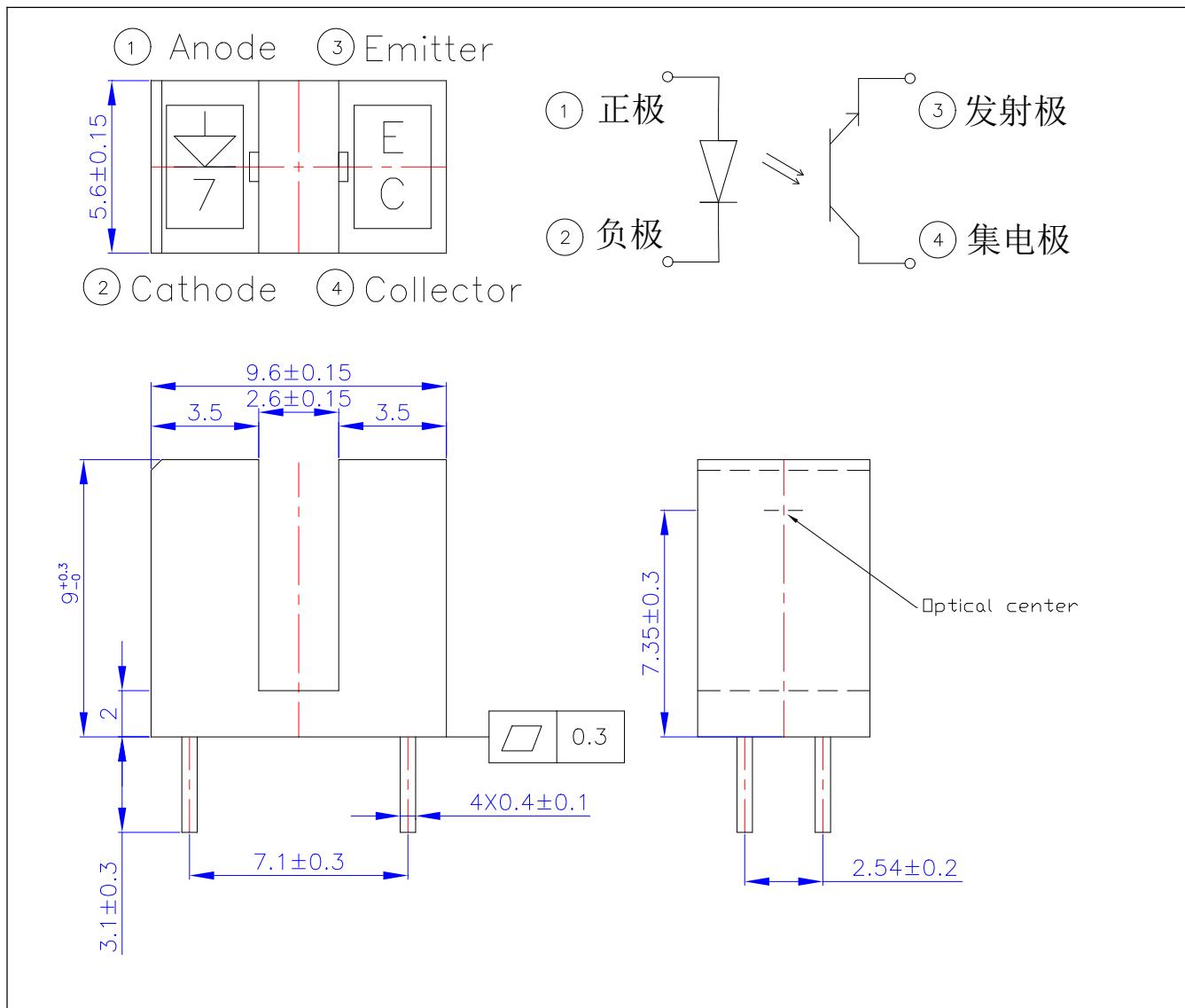
Series Name	Color Code	Remark
HV : HARVATEK	YC00 : 9.6*5.6*9.0mm Transmissive Sensor. With AlGaAs Infrared emitter & Silicon Phototransistor. 26H : HARVATEK Part No. MP9 : Square HOLDER BA : 2 LED	

Features:

- Low power consumption.
- High analytic.
- Fast response.
- Good lock and easy to assembly.

Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 3/10

Package Dimensions:



Notes:

1. All dimensions are millimeters.
2. Tolerance is ± 0.25 mm unless otherwise noted.
3. Specifications are subject to change without notice.

Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 4/10

Absolute Maximum Ratings at Ta=25°C

Parameter		Symbol	Rating	Unit
Emitter	Forward Current	I _F	50	mA
	Power Dissipation	P _d	75	mW
	Reverse Voltage	V _R	5	V
	Peak Forward Current *1	I _{FP}	1	A
Receiver	Collector Current	I _c	20	mA
	Power Dissipation	P _d	75	mW
	Collector-Emitter Voltage	V _{ceo}	30	V
	Emitter-Collector Voltage	V _{eco}	5	V
Operating Temperature		T _{opr}	-40 to +85	°C
Storage Temperature		T _{stg}	-40 to +100	°C
Soldering Temperature *2		T _{sol}	260 ± 5	°C
Electrostatic Discharge		ESD	2000	V

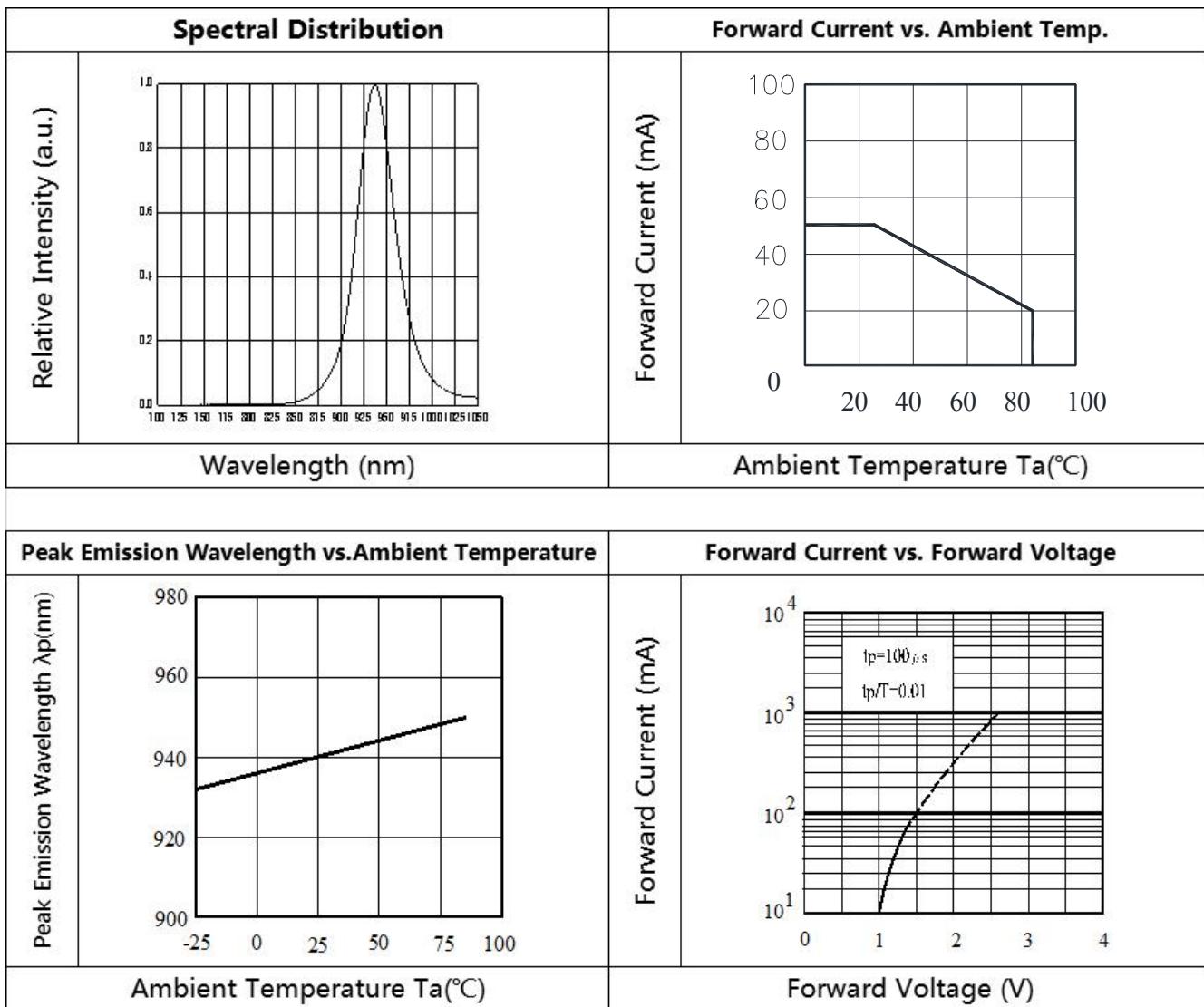
*1: Pulse Width \leq 100 μ s and Duty \leq 1% *2: Soldering time \leq 5 seconds.

Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 5/10

Electrical and Optical Characteristic

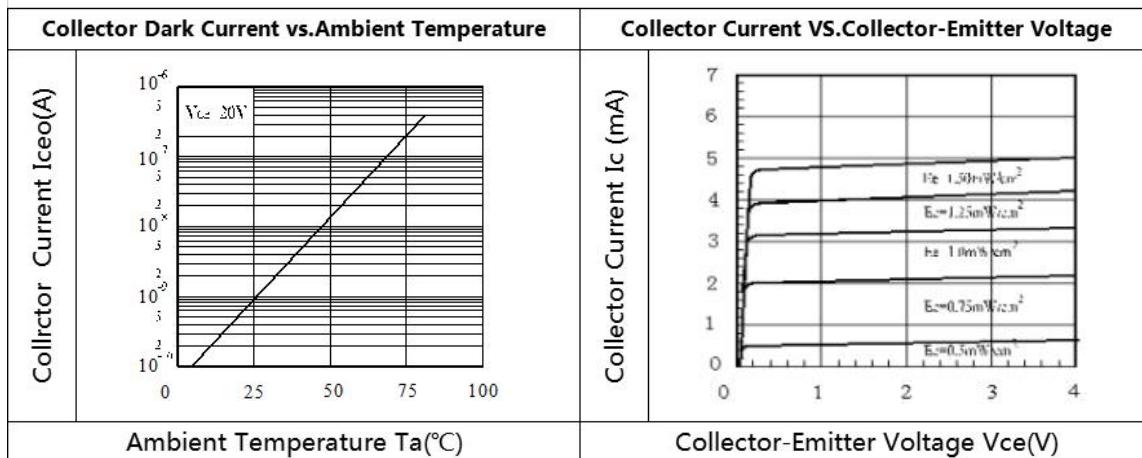
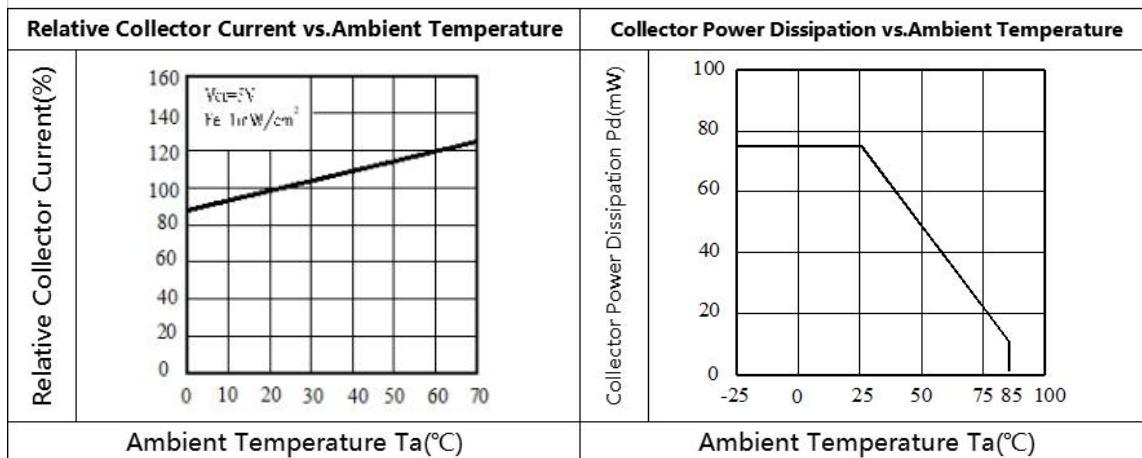
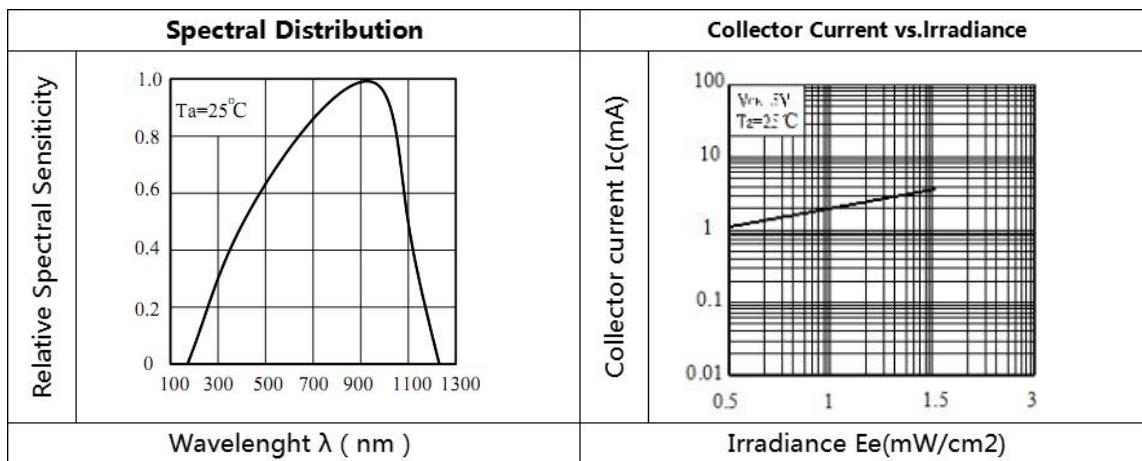
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Emitter	Forward Voltage	V_F	$I_F=20\text{ mA}$	/	1.2	1.5	V
	Reverse Current	I_R	$VR= 5\text{ V}$	/	/	1	μA
	Peak Wavelength	λ_p	$I_F=20\text{ mA}$	930	940	/	nm
Receiver	Dark Current	I_d	$V_{CE}=20\text{V}$	/	/	100	nA
	C-E Saturation	$V_{CE}(\text{sat})$	$I_c=0.5\text{mA}$ $I_F=20\text{ mA}$	/	/	0.4	V
Transfer Characteristics	Collect Current	$I_{C(ON)}$	$V_{CE}=5\text{V}$ $I_F=20\text{ mA}$	0.5	/	/	mA
	Rise time	T_r	$V_{CE}=5\text{V}$ $I_c=1\text{mA}$ $R_L=1\text{K }\Omega$	/	15	/	$\mu\text{ S}$
	Fall time	T_f		/	15	/	$\mu\text{ S}$

Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 6/10

Typical Electro-Optical Characteristics Curves For IR

Official Product	HV-YC0026H-MP9BA *****	Customer Part No. *****	Data Sheet No. HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 7/10

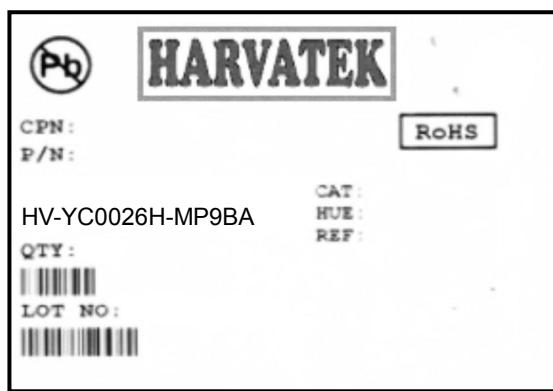
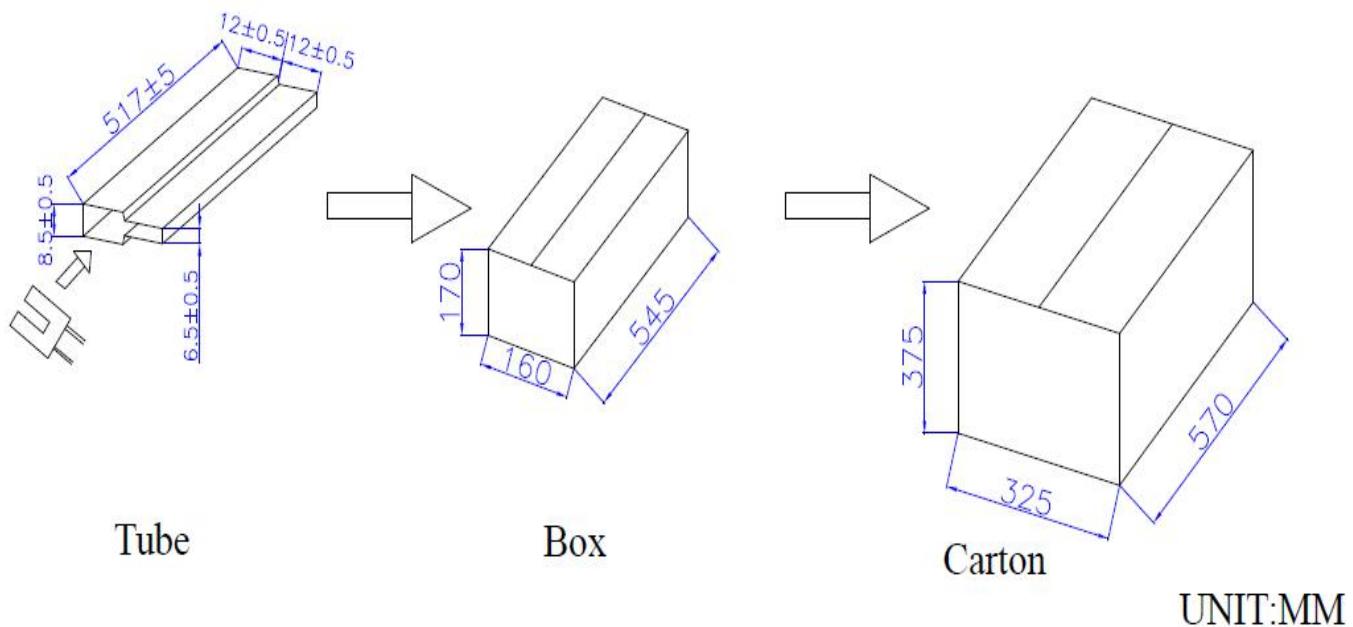
Typical Electro-Optical Characteristics Curves For PT



Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Nov. 11 2019	Version of 2.0
		Page 8/10	

Packing Specification:

50PCS/Tube, 100Tube/Box, 4Box/Carton



Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 9/10

Revision History

Revision	Page	Version No.	Revision Date
Initial Release		1.0	03-01-2017
Add Typical Electrical/Optical Characteristic Curves	7,8	1.1	06-16-2017
Update Package Dimensions	4	1.2	08-23-2017
Update Package Dimensions& Packing Specification	4,9	1.3	09-01-2017
Change the Holder and PIN size	4	1.4	06-01-2018
Add ESD /Modify Reverse Current	5.6	1.5	06-14-2018
Change Typical Electrical/Optical Characteristic Curves	7,8	1.6	07-09-2018
Change of "Voltage" to "Light Current"	6	1.7	07-16-2018
Add Test project	6	1.8	08-08-2018
Modify Package Dimensions	4	1.9	08-12-2019
Modifies Peak Wavelength	6	2.0	11-11-2019

Official Product	HV-YC0026H-MP9BA	Customer Part No.	Data Sheet No.
	*****	*****	HV-YC0026H-MP9BA
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Nov. 11 2019	Version of 2.0	Page 10/10