

# UVX-100

## LUMINESCENCE SENSOR

Confirm manufacturing processes more reliably than vision systems that cost ten times more. The UVX™ employs our field-proven, patented technology, for effective detection of UV luminescent materials such as wood, grease, adhesives, UV inks and optical brighteners used in many industrial applications. Its high-sensitivity and fast response makes the UVX suitable for high-speed automation processes. The metal alloy case and glass lens provide robust construction expected in an industrial environment.

The UVX features a 2-digit display that provides an indication of signal strength making set-up and integration quick and easy. The versatile sensor provides user set-up parameters including light source intensity adjustment, detection threshold and gain selection making the UVX useful in a wide range of applications.

The UVX includes both a discrete PNP/NPN output and an analog output. The discrete output is automatically set for PNP or NPN operation. The analog output signal may be used to access the relative quantity of UV materials such as optical brightener coatings applied to clear films.

# UVX



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## Applications

- Adhesives, gums and glues
- Labels, packaging
- UV inks, visible and invisible
- UV crayons and chalk, lumber marking
- Tamper-evident-seals
- Textiles, luminescent threads
- Optical brightness, paper industry
- Grease and oils

## Design & Features

- Small spot size
- High sensitivity and high resolution
- Fast response
- Display range 00-50
- Two gain settings
- Analog output
- PNP/NPN discrete output

## Ordering Information



UVX-100  
Luminescence sensor

## Accessories



UVX-300L50  
50 mm focal lens



UVX-300B  
Bracket



UVX-300C  
Cable 5P, 5M, M12, F

**NOT INTENDED FOR USE IN  
PERSONAL SAFETY APPLICATIONS.**

## Functions

**NORMAL OPERATING MODE**  
**SENSITIVITY**  
**THRESHOLD**  
**UV LED INTENSITY**  
**HYSTERESIS LEVEL**  
**DISCRETE OUTPUT**  
**OUTPUT PULSE STRETCH**  
**SECURITY**  
**TEACH MODE**

Displays relative reflection intensity  
X1 and X10  
Set detection level  
Set LED, LO, MED, HI  
Set undetect level 1-9 steps below threshold  
Set normally open or normally closed  
Set minimum output period 10...90mS  
Lock/unlock pushbutton controls  
Auto-set detection threshold

## Specifications

**Light source**  
370nm UV LED, 100,000 hrs.  
**Light spot size**  
6...8mm dia. @ 50mm  
**Light source intensity**  
3 levels  
**Sensing distance**  
up to 100mm  
**Receiver Spectral Response**  
350...1000nm  
**Response time**  
<150uS  
**Switching Frequency**  
6kHz  
**Relative intensity display range**  
00 to 50  
**Sensitivity**  
X1, X10  
**Signal level**  
Two 7 segment digits  
**Detection threshold**  
Two 7 segment digits  
**Digital Output**  
Auto-Detect PNP / NPN  
**Output Function**  
NO/NC selectable  
**Analog Output**  
0...5V  
**Power indicator**  
Green LED  
**Detect indicator**  
Red LED  
**Programming indicator**  
Yellow LED  
**Data retention**  
EEPROM non-volatile memory  
**Dimensions**  
51mm x 61mm x 25mm  
(2.0" x 2.4" x 1.0")  
95 g (0.21 lbs.)  
**Weight**  
10...24 VDC  
**Supply Voltage**  
60 mA  
**Operating Current**  
Discrete output  
**Short Circuit Protection**  
Supply voltage  
**Overload / Reverse Polarity Protection**  
-20°C...55°C  
**Operating Temperature**  
-20°C...70°C  
**Storage Temperature**  
Metal alloy  
**Housing**  
IP67 NOT FOR PRESSURE WASHDOWN  
**Mechanical Protection**

370nm UV LED, 100,000 hrs.

6...8mm dia. @ 50mm

3 levels

up to 100mm

350...1000nm

<150uS

6kHz

00 to 50

X1, X10

Two 7 segment digits

Two 7 segment digits

Auto-Detect PNP / NPN

NO/NC selectable

0...5V

Green LED

Red LED

Yellow LED

EEPROM non-volatile memory

51mm x 61mm x 25mm

(2.0" x 2.4" x 1.0")

95 g (0.21 lbs.)

10...24 VDC

60 mA

Discrete output

Supply voltage

-20°C...55°C

-20°C...70°C

Metal alloy

IP67 NOT FOR PRESSURE WASHDOWN

### Indicators

#### 7-Segment display

Green LED

LED

Red LED

Power

Yellow LED

Detect

Program

### Connector M12

Pin 1

Power to 24VDC

Pin 2

Discrete output

Pin 3

PNP/NPN NO/NC

Pin 4

Ground

Pin 5

Analog output 0 to

5V DC

Remote LOCK/

UNLOCK input



**WARRANTY** EMX INC. the product described herein for a period of 2 years under normal use and service from the date of manufacture. The product will be free from defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser from incorrect connections, or lightning damage. There is no warranty of merchantability. There are no warranties expressed, implied or any affirmation of fact or representation which extend beyond the description set forth herein. EMX Inc. sole responsibility and liability, and purchaser's exclusive remedy shall be limited to the repair or replacement at EMX's option of a part or parts not so conforming to the warranty. In no event shall EMX Inc. be liable for damages of any nature, including incidental or consequential damages, including but, not limited to any damages resulting from non-conformity defect in material or workmanship.