

# Online EPG Sensor Head

## T-Gauge® HXC53y2

The HXC53y2 Online EPG Sensor Head allows measurement of thinner layers than the standard HXC50yn Online Sensor Head. With higher bandwidth, and higher signal to noise, the EPG opens new applications to terahertz process control.

The transmitter and receiver are securely mounted inside the sealed metal housing. The umbilical for the transceiver, containing the electrical and optical connections, is constructed with high flex rated electrical cable to allow continuous scanning.

When connected to a T-Ray® 5000 Control Unit (TCU), the HXC53y2 will provide excellent waveform response, capable of providing detailed single-sided measurement of layered products.

Coatings on metal or composite substrates and free standing films can be measured down to 10 microns (0.5 mils).

### APPLICATIONS

- Industrial process control: coating thickness; plastic extrusion; foam density; adhesive foams
- Nondestructive materials inspection: robot mounted inspection of aircraft coatings
- Converting applications: paper coating; multilayer films



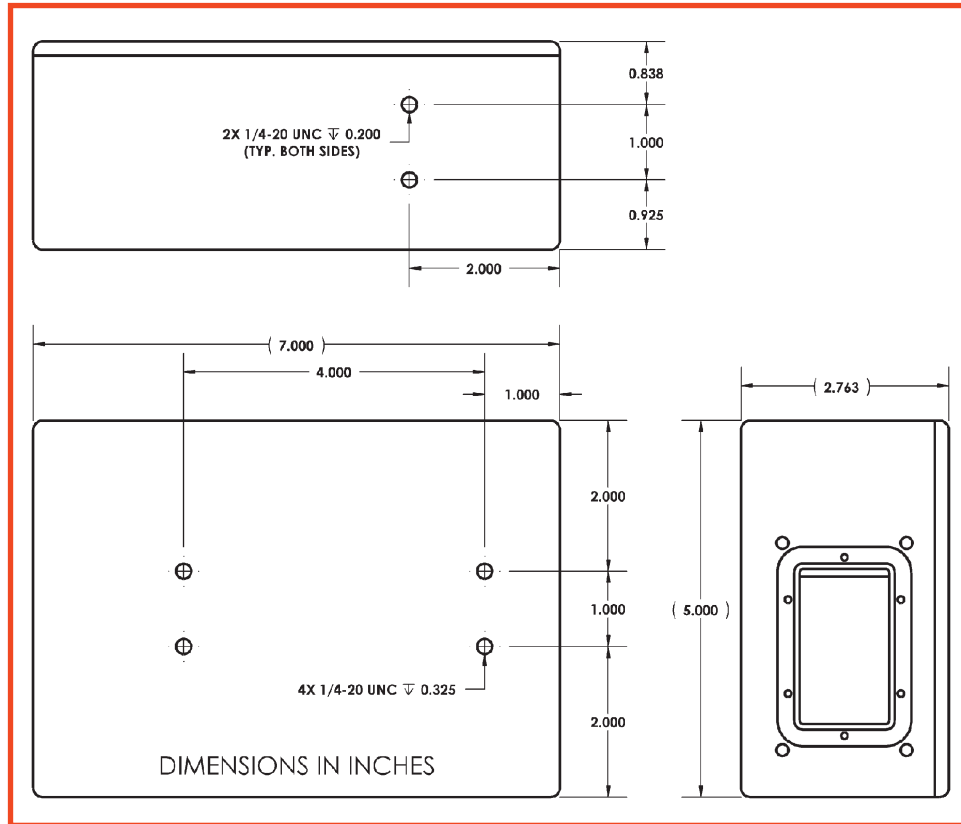
### KEY FEATURES

- Full transceiver functionality
- Offset transmitter and receiver for enhanced performance
- TPX lens for low loss
- Hardened case for industrial environment
- Use to measure layer thickness
- Use to produce scanned images
- Single high flex umbilical
- Variety of focal lengths available
- Capable of being cleaned

### BENEFITS

- Replaces multiple sensors
- No need for separate transmitter and receiver
- Single umbilical combines optical and electrical signal transport
- Unlimited transmitter and receiver lifetime
- Robust strain relief on umbilical
- Compatible with various motion options
- Long umbilical life in scanner or robot
- Improve measurement fidelity by optimizing bandwidth
- Tolerant to dirt and dust in the factory

Parameter	Specification	Units	Comments
Polarization Extinction Ratio	> 20:1		Horizontal
Available Lens Focal Length	75, 150	mm	Other lens available on request
Beam Diameter	20	mm	
Mounting Hardware	1/4 - 20		Threaded mounting holes
Operating Temperature Range	0 - 50	°C	20 - 90% RH non-condensing
Size (W x H x D)	128 x 70 x 178	mm	
Weight	1.6	kg	
Minimum Thickness (Single Layer)	10	µm	Kapton film
Minimum Thickness (Buried Layer)	25	µm	e.g. EVOH, foam
Passline Tolerance	±2	mm	150mm lens



## ORDERING INFORMATION

### Included

- TPX Lens (3, or 6 in)

### Typical Configuration

- Terahertz Controller
- Umbilical (5, 10, or 30 m)
- T-Ray Basic and T-Gauge Software

### Industry Leading Regulatory Compliance

The T-Ray® 5000 intelligent TCU has been certified by Underwriters Laboratories has received the CE mark, is fully compliant with FDA CDRH laser safety regulations, and has been tested to meet FCC part 18 regulations.



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