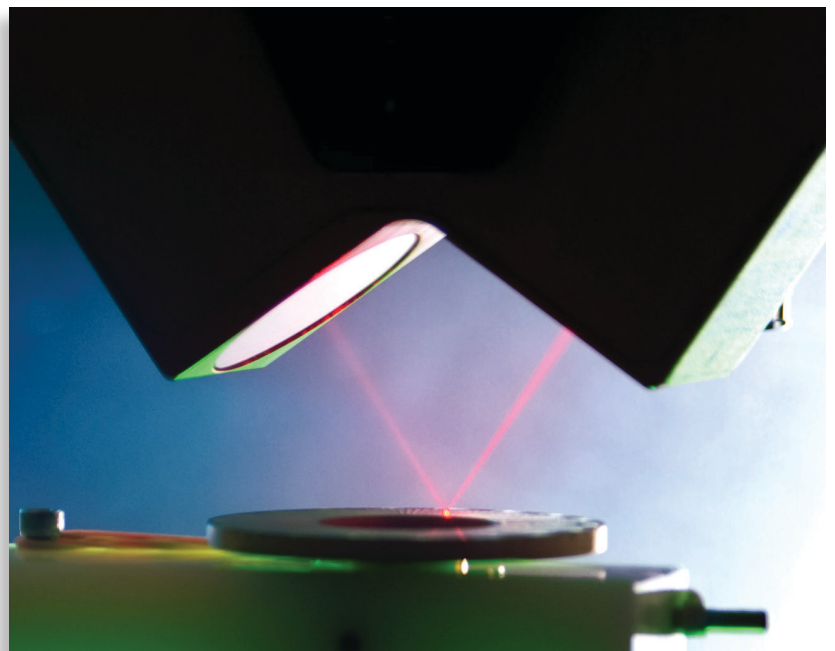


**DRS** (Digital Range Sensor) are off-axis lasers that provide noncontact, high resolution surface profiling. Two DRS Lasers are available, the DRS-500 or DRS-500B. The 500B uses a blue laser rather than red which is better on translucent or white parts. DRS lasers offer:

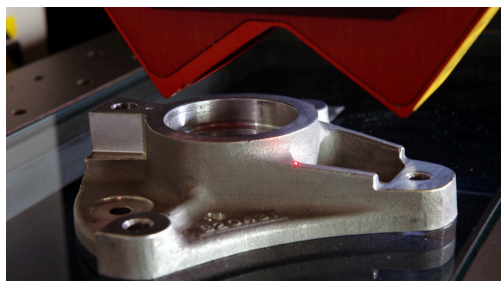
- **Automatic Deployment –** DRS Lasers are mounted on automatic deployment mechanisms, so the laser can be used when needed and retracted out of the way at other times.
- **Data Measuring/Surface Tracking –** Gather point, linear, or area surface profiles with DRS Lasers. DRS Lasers will dynamically adjust the Z-axis to track part contours measurements.
- **Add Versatility to your Video Measurement System –** DRS Lasers are available for SprintMVP™ and most SmartScope® systems.

## Dynamic Range Sensor for Surface Profile Measurements

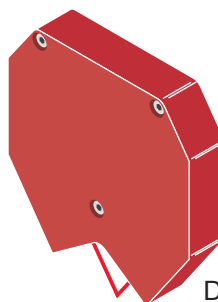




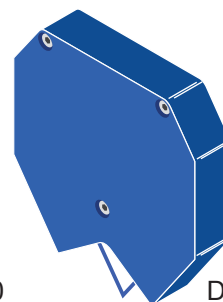
All OGP video and multisensor systems supporting the DRS laser include automatic deployment mechanisms so the DRS can be used when required and automatically moved out of the way when not needed, under program control.



As self-contained modules, DRS lasers emit a laser beam through a window to the surface of the part. The light is reflected from the part to the detection sensor through a window on the opposite side of the module.



DRS-500



DRS-500B

## Technical Specifications

	DRS-500 (Red Laser)	DRS-500B (Blue Laser)
Available for	Cobra™, Lazer, SprintMVP, SmartScope ZIP®, and most SmartScope Flash CNC and Vantage™ systems.	
Required Metrology Software	ZONE3®, Measure-X®, or Scan-X	
Type of Surface	Specular or diffuse reflective surfaces	Best for translucent or white parts
Working Distance <sup>1</sup>	17 mm	
Measuring Range <sup>2</sup>	500 µm	
Spot Size <sup>3</sup> (nominal)	16 x 23 µm	13 x 20 µm
Resolution <sup>4</sup>	0.125 µm	
Accuracy <sup>5</sup>	1.0 µm	
Triangulation Angle	70°	

<sup>1</sup>Distance in Z from the lowest point on the DRS laser to the middle of the capture range.

<sup>2</sup>Measuring Range is the Z-range over which the performance of the sensor is linear and calibrated.

<sup>3</sup>With spot size at best focus.

<sup>4</sup>Using high quality specular (polished glass) surface, 1σ.

<sup>5</sup>Accuracy of the laser on horizontal specular surfaces within the measuring range. System performance varies with machine type.



### Safety Considerations

This system is classified as a Class II laser device by IEC 825 (2001). **Do not stare directly into the laser source.**