

Luminar 3070

BenchTop AOTF-NIR Spectrometer

Data Sheet

BenchTop with Multiple Configuration Options – Luminar 3070

When thinking of AOTF-NIR advantages, most typically think of in-line or at-line advantages. However, the Luminar 3070 Benchtop AOTF-NIR Spectrometer also has advantages because it is an AOTFNIR instrument, namely:

Dry Measurements – reflectance with a rotating dish for powders and granules with almost zero preparation. Single tablets in reflectance are possible. Speed is 5 to 8 seconds per sample.

Liquid Measurements – flow cell with pouring the sample into a funnel, allowing good representation of large sample volume, enabling less homogeneous liquids. Speed is 5 to 8 seconds per sample.

Transmission Arm with Detector – for single tablets in transmission. Also, seeds in transmission.

Immunity to Ambient Light – no need to shield the sample, making it easier to operate.



Rotating Cup for Powder and Solid Measurement

Integrated Flow Cell for Liquid Flowing Out

Configuration Options

- Transmission
- Diffuse Reflectance

Key Features

- **Robust** – Built for In-Line and At-Line Monitoring; Extremely Fast (up to 10 measurements / second Typical)
- **Reliable** – Solid State; Immune to Vibration and Ambient Light; Install Anywhere
- **Accurate** – Real-Time Dual Beam Referencing; Real 1 or 2 nm Steps

What is measured?

- Measurements of Chemical and Physical Properties of Powders, Solids, Liquids, Gels, Tablets, Seeds, etc.
- Flour Measurement
- Sugar Monitoring

AOTF-NIR Advantages

- **Solid State** – No Moving Parts
- **Faster** – Up to 10 measurements / second and can get up to 30 scans per second across the whole wavelength range (1100-2300 nm)
- **Sensitive** – higher resolution with excellent signal-to-noise ratio
- **Customized for Purpose** (ATEX / UL / IPxx)
- **Immune to Ambient Light & Vibration** – no need to block ambient light from the sample
- **Real-Time Dual-Beam Reference** – No Drifting, Excellent Wavelength Repeatability, No Need to Recalibrate The Device



Technical Specification

Spectral Range Options	850-1700 nm, 900-1800 nm, 1100-2300 nm (standard)
Wavelength Repeatability	± 0.01 nm
Spectral Resolution	2-10 nm
Wavelength Accuracy	± 0.5 nm
Sampling Speed	16,000 wavelength/sec
Ambient Light Rejection	> 10 ⁶
Installation Requirement	
Power Requirements	12VDC, (24 VDC special order), 90Watts, 110VAC 60Hz, 220VAC 50 Hz
Cooling Options	Fan-cooled
Communication	TCP/IP Ethernet
Accessories / options	
<ul style="list-style-type: none">• Rotating Sample Cup for Powder and Solid Measurement• Built-in Flow Cell for Liquid Flowing Out	



Model
920D
Powders and solids
measurement and liquid
measurement