



# OWI-650 Low Power LP-AWS<sup>®</sup> Portable Automated Weather Station



The LP-AWS<sup>®</sup> is an advanced, portable, **Low Power Automated Weather Station** built around the **OWI-650 Low Power Weather Identifier and Visibility Sensor (LP-WIVIS<sup>®</sup>)**. The low power requirements of the OWI-650 make it well suited for portable battery and solar powered applications. The system has been designed from the ground up for fast setup anywhere.

The OWI-650 measures visibility and detects rain, snow, drizzle, freezing and mixed precipitation conditions. The OWI-650 is more than just a sensor. It is a system. No separate data acquisition system is required to add optional meteorological sensors. Implementing a portable automated weather station with weather identification and visibility sensor capability has never been easier or as cost effective.

## LP-AWS<sup>®</sup> Advantages

- Easy installation
- Portable system which reports present weather and visibility
- Intelligent algorithms based on over 200 million hours of OSI sensor field data
- Solar, Battery or AC Powered
- Small size, light weight, rugged design
- Other sensors easily added
- Data radio options available
- Separate data acquisition system not required
- Design for unattended operation
- Virtually no maintenance required
- Built-in self diagnostics & testing

The fully automated OWI-650 provides accurate visibility, present weather and precipitation measurements. Typical systems include other optional meteorological sensors including wind, pressure, and temperature/ humidity sensors.

OSI's patented environmentally adaptive weather identification algorithms use artificial-intelligence technology derived from over 25 years experience and over 200 million field hours of real-world data from OSI sensors installed around the world. The result is the most advanced / easily deployable Automated Weather Station with optical weather identifier and visibility sensor available.

## LP-AWS<sup>®</sup> Ordering Information:

Model No: OWI-650-DR  
DC powered, RS-232 serial I/O  
(Specify Metric or ANSI)

## LP-AWS<sup>®</sup> Accessories:

(Optional Sensors - Contact OSI)

<b>PSB-650</b>	AC-powered junction box
<b>PSB-650S</b>	Power Junction Box with Solar Kit
<b>PSB-650B</b>	Power Junction Box with Rechargeable Battery
<b>TRI-650</b>	AWS Tripod
<b>Data Radio</b>	Contact OSI

# OWI-650 LP-WIVIS<sup>®</sup> Specifications

Performance Specification	
Measurement Technique	Scintillation with optical forward scatter and optional acoustic*
Data Reporting Update Rate	1 minute
Present Weather Codes Reported	More than 50 NWS and WMO codes
Present Weather Type Identification	Rain, freezing rain, snow, freezing drizzle, mist, mixed, fog, haze, clear
Snow / Rain Accumulation	0.001 to 999.999 mm
Snow / Rain Measurement Resolution	0.001 mm
Rain Dynamic Range	0.1 to 3000 mm/hr
Rain Measurement Accuracy	5% accumulation
Snow Dynamic Range	0.01 to 300 mm/hr
Snow Measurement Accuracy	10% accumulation
Visibility / RVR Dynamic Range (metric and ANSI units & extended ranges available)	0.01 to 10+ km 0.001 to 7.1 miles
Visibility Contrast Threshold	5%
Ambient Light Dynamic Measurement Range	0 to 9,990 candles / m <sup>2</sup>

Electronic Specification	
Power Requirements	
Electronics	3.6 vdc @ 375 mA
Heaters	12 vdc @ 600 mA
Transient Protection	All power & signal lines fully protected
Signal Output	RS-232 ASCII, simple polled protocol

Environmental Specification	
Temperature	-40° to 122° F (-40° to 50° C)
Humidity	0 to 100%
Precipitation / Dust	NEMA 4 type protection

Physical Specification	
DSP-WIVIS Sensor Size	21 x 8 x 4 inches (53 x 20 x 10 cm)
DSP-WIVIS Sensor Weight	4.25 lbs. (1.9 kg)
Cable Length	12 ft. (3.7 meter)

Specifications are subject to change without notice



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