



**LIGHTHOUSE**  
WORLDWIDE SOLUTIONS  
Technology That Counts!



**EXTREME LIFE LASER DIODE TECHNOLOGY**



**SOLAIR 3100**

**SOLAIR 5100**

**1.0 CFM (28.3 LPM)**

**Airborne Particle Counters**

The **SOLAIR 3100** and **SOLAIR 5100** portable airborne particle counters incorporate our **Extreme Life Laser Diode Technology** sensor to produce the industry's longest laser diode life of 20+ years MTTF (based on continuous 24/7 operation). Using a new, lighter extended-life battery and external AC adapter, the **SOLAIRs** are even more portable.

The **SOLAIR** features one of the industry's best User Interfaces (UI) to configure and operate the instrument with intuitive ICON-driven screens and menus that are simple, easy to learn and use.

The **SOLAIR** can store up to 3,000 records of particle count data from up to 8 particle channels and the configurable recipe database can store up to 50 recipes for sampling and reports. All data can be quickly and reliably transferred to a computer, a Facility Monitoring System or a Building Automation System.

Secure data transfer (per 21 CFR Part 11) to a USB Flash Drive can be accomplished by using the Lighthouse Secure Data transfer feature and **LMS Express** or **Express RT** software to read it. Flexible communications with these instruments is made possible by the integrated Ethernet, RS-485, USB and USB Flash Drive interfaces.

**SOLAIRs** are designed, manufactured and calibrated to ISO 21501-4 to ensure particle counting accuracy.

**Designed and built by  
Lighthouse - a name you can trust.**

*Lighthouse is an ISO 9001:2008 Registered Company*

**[www.golighthouse.com](http://www.golighthouse.com)**

**Features:**

- ★ SOLAIR 3100: 0.3µm to 25.0µm
- ★ SOLAIR 5100: 0.5µm to 25.0µm
- ★ 1.0 CFM (28.3 LPM) Flow Rate
- ★ Simultaneous Display of up to 8 Particle Sizes
- ★ 21 CFR Part 11 Compliant Secure Data Transfer via USB Flash Drive
- ★ Extreme Life Laser Diode Technology  
>20-year MTTF Laser Lifespan
- ★ Thermal Printer
- ★ Stainless Steel Construction
- ★ Designed for ISO 21501-4 Compliance:  
Unit-to-Unit Accuracy & Repeatability Assured
- ★ Multiple Communication Interfaces - USB, RS-485, Ethernet and USB Flash Drive
- ★ 5.7-inch Color TFT Touch Screen Display
- ★ 3000-record Data Storage Memory
- ★ 50-record Configurable Recipe Database
- ★ User-Definable Printouts
- ★ Open Architecture Connectivity with OPC Server
- ★ Report Wizard for Cleanroom Pass/Fail Reports:  
FS-209E, ISO-14644-1 or EU GMP Annex 1

**Benefits:**

- ★ User Friendly Interface with Multiple Languages
- ★ International Support
- ★ 2 year Warranty
- ★ Easy Integration to External Systems with OPC Server

**Applications:**

- ★ Cleanroom Monitoring
- ★ Facility Certification Testing
- ★ Trend Analysis
- ★ Tool and Equipment Testing
- ★ Multi-Point Facility Monitoring  
(with 6 or 32 port Manifold System)
- ★ Compressed Gas Monitoring  
(with High Pressure Controller)



**Specifications:**

	3100	5100
<b>Size Range:</b>	0.3 - 25.0µm	0.5 - 25.0µm
<b>Standard Channel Sizes:</b>	0.3, 0.5, 1.0, 3.0, 5.0, 10.0µm 0.3, 0.5, 1.0, 5.0, 10.0, 25.0µm	0.5, 0.7, 1.0, 3.0, 5.0, 10.0µm 0.5, 1.0, 3.0, 5.0, 10.0, 25.0µm
<b>8-Channel:</b>	0.3, 0.5, 0.7, 1.0, 3.0, 5.0, 7.0, 10.0µm	0.5, 0.7, 1.0, 2.0, 3.0, 5.0, 7.0, 10.0µm
<b>Flow Rate:</b>	1.0 CFM (28.3 LPM)	
<b>Counting Efficiency:</b>	3100, 50% @ 0.3µm; 100% @ sizes > 0.45µm; 5100, 50% @ 0.5µm; 100% @ sizes > 0.75µm Per JIS B 9921 and ISO 21501-4	
<b>Light Source:</b>	<i>Extreme Life Laser Diode Technology</i> with >20-year Mean Time To Failure (MTTF)	
<b>Zero Count Level:</b>	<1 count / 5 minutes (per JIS B 9921)	
<b>Concentration Limits:</b>	1,000,000 Particles/ft <sup>3</sup> (35,300,000/M <sup>3</sup> ) @10% Coincidence Loss, Suitable for ISO classes 1 through 8 Cleanrooms	
<b>Calibration:</b>	Meets ISO 21501-4 Calibration using NIST Traceable PSL Spheres, DMA and Condensation Particle Counter	
<b>Count Modes:</b>	Automatic, Manual, Beep, Concentration, Cumulative/Differential and Real Time (with <i>LMSNet</i> or <i>LMS Express RT</i> )	
<b>Data Storage:</b>	3,000 Sample Records (Rotating Buffer), which includes particle and environmental data with locations and times	
<b>Communication Modes:</b>	USB; Ethernet; RS-485; Secure Data Transfer to and Storage on USB Flash Drive	
<b>Supporting Software:</b>	<i>LMS XChange</i> , <i>LMS Express</i> and <i>Express RT</i> ; <i>LMS Standard</i> ; <i>LMS Pharma</i> ; <i>CREWin</i>	
<b>Touch Screen Display:</b>	5.7-inch (14.47 cm) Color TFT Touch Screen Display	
<b>Location Labels:</b>	Up to 400, based on Location Label Length	
<b>Printer:</b>	Built-in Thermal Printer (non-printer model available)	
<b>Reports:</b>	Pass/Fail Report Wizard for ISO-14644-1, EU GMP Annex 1 and FS-209 Report Formats	
<b>Alarm:</b>	Integrated Alarm Buzzer and External Alarm Connection. Alarms on Counts and Low Battery	
<b>Enclosure:</b>	Stainless Steel	
<b>Sample Output:</b>	Internally filtered to HEPA standards (>99.97% @ 0.3µm)	
<b>Vacuum Source:</b>	Internal Closed-loop Controlled Pump: allows the use of Sample Tubing of up to 12 Meters (40 feet) in length	
<b>Power:</b>	100-240 VAC, 50-60 Hz, External AC/DC Adapter	
<b>Battery:</b>	Lightweight Extended-life Li-Ion, Removable & Rechargeable	
<b>Dimensions:</b>	9.5" (d) x 8.0" (w) x 10.2" (h) [24.13 x 20.32 x 25.9 cm]	
<b>Weight:</b>	With Battery: 13.0 lbs (5.89 kg); Without Battery: 11.5 lbs (5.2 kg)	
<b>Languages:</b>	English, Français, Deutsch, Italiano, Español, Chinese (Simplified)	

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**Environmental Conditions:**

Operating: 50°F to 104°F (10°C to 40°C) / 20% to 95% non-condensing  
Storage: 14°F to 122°F (-10°C to 50°C) / Up to 98% non-condensing

**Accessories:**

Included: Operating Manual on CD; Isokinetic Sample Probe with Tripod and Tubing; Purge Filter; Power Cable and Spare Fuse; LMS XChange Software; Printer; Printer Paper

Optional: Wireless Network Adapter; Removable Rechargeable Li-Ion Battery; Carrying Case with Wheels; Temperature/Relative Humidity Probe; Differential Pressure Probe; Intelligent Filter Scanning Probe; Air Velocity Probe; Spare Removable Rechargeable Li-Ion Battery; External Battery Charger; LMS Express, RT Software; LMS Pharma Edition Software; LMS Standard Software; Validation Documentation; Printed Operating Manual; Cleanroom Cart

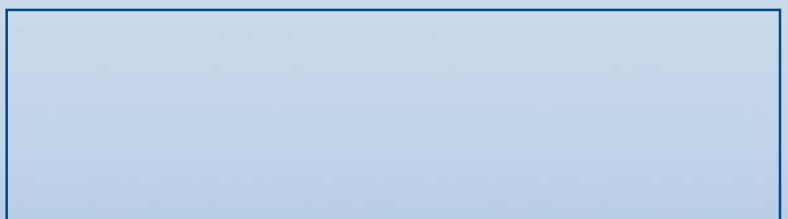
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*Lighthouse Worldwide Solutions reserves the right to change specifications without notice.*

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