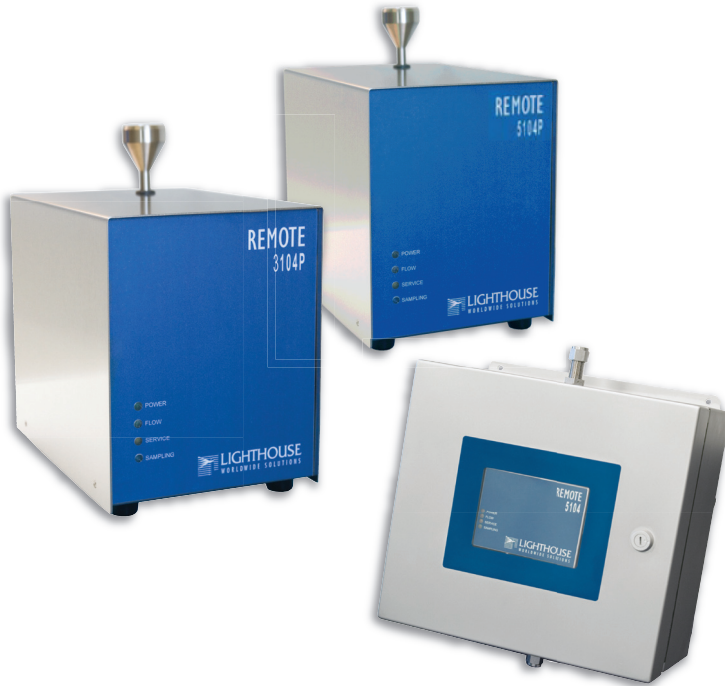




 **EXTREME LIFE LASER DIODE TECHNOLOGY**



# REMOTE 3104P, 5104P, 5104PN AIRBORNE PARTICLE COUNTERS

Incorporating the Extreme Life Laser Diode Technology for a >20-year Mean Time to Failure (MTTF). Lighthouse designed the **REMOTE 3104P**, **5104P** and **5104PN** airborne particle counters for continuous trouble-free operation.

With sensitivities of 0.3 and 0.5 micron, respectively, at a flow rate of 1 CFM (28.3 LPM), the **REMOTE 3104P**, **5104P** and **5104PN** provide real-time continuous data collection at a cost-effective price per point. Using an internal vacuum source, the compact **REMOTE 3104P**, **5104P** and **5104PN** particle counters can be installed where space is at a premium.

The **REMOTE 3104P**, **5104P** and **5104PN** integrate seamlessly into large facility monitoring and management systems by leveraging their Ethernet, RS-485 MODBUS or Serial USB ports. Transferring up to 6 channels of simultaneous particle count data is fast and easy for these instruments.

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

Lighthouse is an ISO 9001:2008 Registered Company.

## Features :

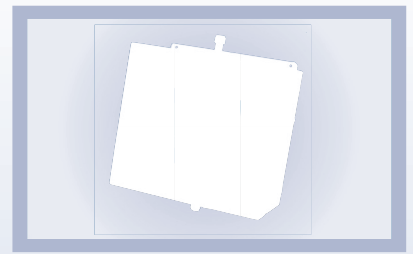
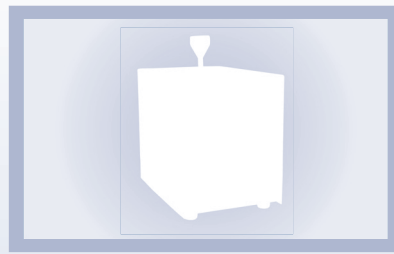
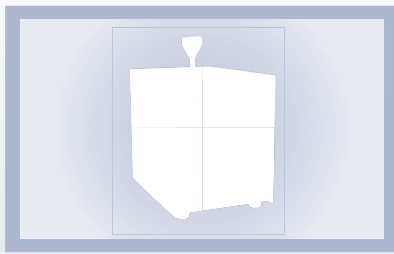
- REMOTE 3104P : 0.3 - 25.0  $\mu\text{m}$
- REMOTE 5104P : 0.5 - 25.0  $\mu\text{m}$
- REMOTE 5104PN : 0.5 - 5.0  $\mu\text{m}$
- 0.1 cfm (2.83 LPM) Flow Rate with internal pump
- Up to 2-6 Channels of Simultaneous Data
- All Models Meet JIS Standards
- Stainless Steel Enclosure
- Up to Four 4-20 mA Inputs (30 mW)
- LED Status Indicators
- External Alarm Connector
- Ethernet, RS-485 Modbus and Serial USB ports
- Facility Monitoring Systems Interface
- Flow-controlled Internal Vacuum Pump
- >20 Year Mean Time To Failure Reliability

## Benefits:

- 2 Year Warranty
- Installs in Limited Space
- Cost Effective Price per Point
- Proven Data Integrity
- Proven Reliability
- Continuous Real-Time Data
- Easy System Integration
- International Support
- Low Cost of Ownership

## Applications:

- Aseptic Process Monitoring
- Isolator Monitoring
- Aerospace
- Chemical Manufacturing
- Equipment Monitoring
- Pharmaceutical Packaging and Manufacturing
- Trend Analysis
- Cleanroom Laundries
- Cleanroom Packaging
- Semiconductor
- Hard Disk Drive Manufacturing



	<b>3104P</b>	<b>5104P</b>	<b>5104PN</b>
<b>Size Range:</b>	0.3- 25.0 µm	0.5 - 25.0 µm	0.5 - 25.0 µm
<b>Channel Sizes:</b>	Standard : 0.3, 0.5, 1.0, 5.0 µm	Standard : 0.5, 1.0, 5.0, 10.0 µm	Standard : 0.5, 5.0 µm Standard : 0.5, 10.0 µm
<b>Counting Efficiency:</b>	50% @ 0.3 µm; 100% for particles > 0.45 µm (per JIS)	50% @ 0.5 µm; 100% for particles > 0.75 µm (per JIS)	50% @ 0.5 µm; 100% for particles > 0.75 µm (per JIS)

*Additional Channel Sizes are available. Please contact your Lighthouse Sales Engineer for more information about these options.*

<b>Flow Rate</b>	: 1.0 CFM (2.83 LPM)
<b>Laser Source</b>	: Laser Diode
<b>Zero Count Level</b>	: <1 count / 5 minutes (per JIS)
<b>Concentration Limits</b>	: 500,000 Particles / ft <sup>3</sup> @ 5% Coincidence Loss
<b>Calibration</b>	: NIST Traceable
<b>Vacuum Requirements</b>	: Internal Vacuum Pump
<b>Air Flow</b>	: Internally Monitored and Controlled
<b>Communication Modes:</b>	: Ethernet, RS-485 MODBUS, Serial USB
<b>LED Indicators</b>	: Power, Flow, Service, Sampling
<b>Data Storage</b>	: 3,000 Samples
<b>Connector</b>	: 2 RJ45, 2 RJ12 and one USB 'B'
<b>Supporting Software</b>	: LMS XChange, Lighthouse Monitoring System; LMS Express; Express RT and RT+; LMSNet
<b>Up to Four 4-20 mA Inputs</b>	: Can be used with the Lighthouse standard 4-20 mA Temperature/Relative Humidity, Air Velocity or Differential Pressure Probes or any other 4-20 mA device
<b>External Alarm Output:</b>	: Normally Open Dry Contact Rated 0-60 V AC/DC 1 Amp
<b>Enclosure</b>	: Stainless Steel
<b>Power</b>	: 24 VDC
<b>Dimensions</b>	: 9.5"(l) x 6.5"(w) x 8.51"(h) [24.13 x 16.51 x 21.62 cm]
<b>Weight</b>	: 12.33 lbs (5.59 kg)

## Environmental Conditions

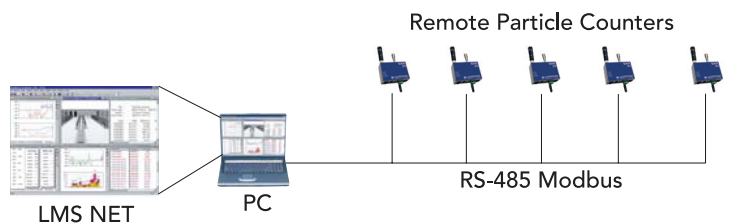
**Operating :** 50°F to 104°F ( 10°C to 40 °C) / 20% to 95% non-condensing  
**Storage :** 14°F to 122°F (-10°C to 50 °C) / Up to 98% non-condensing

## Accessories

**Included :** Operating Manual on CD

**Optional :** Printed Operating Manual;  
 RS-485 Hub with Power Supply;  
 RS-232 Communication Cable and Adapter;  
 USB to Serial Port Converter; Network Adapter;  
 Wireless Network Adapter; Isokinetic Sampling Probes;  
 Vacuum Tubing; Sample Tubing; Data Cable; Purge Filter;  
 Power Supply; Temperature/ Relative Humidity Probe;  
 8' T/RH Probe Extension Cable; REMOTE Mounting Kit;  
 LMSXChange, LMS Express; Express RT and RT+,LMSNetsoftware;  
 RS-485 Communication Kit; High-Pressure Diffuser.

## SAMPLE SYSTEM INTEGRATION



Manufactured by:



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

Tel: 800 945 5905 (Toll Free)  
541 770 5905 (Outside of USA)



**laftech**

Call: 1300 306 002 [www.laftech.com.au](http://www.laftech.com.au)

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Accredited Laboratory