PHOENIX IMAGING, LTD.

Providing Equipment and Tools for Manual Inspection

MIB-140™

Precision Engineered Lighting Equipment

MIB-140D™ (Version 4.0) , Standard Configuration with keyed lock-out to prevent unauthorized parameter changes.
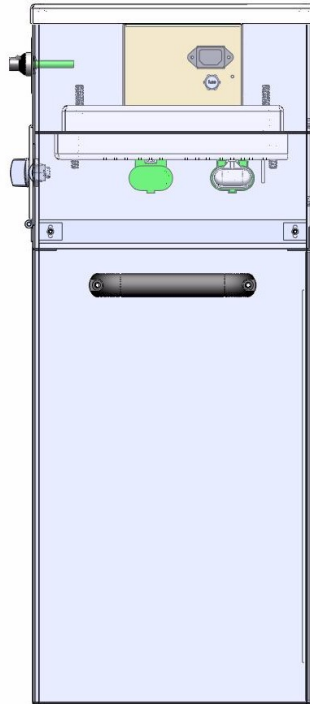
Advanced Single-Sided Lighting System

Top Dual Lamp Configuration
Benchtop Unit

Manual
Inspection
Solutions
That Work

Technology at work for you

MIB-140™ SERIES
MANUAL INSPECTION BOOTHS

The latest iteration of the MIB-140™ units are now available after its first revision as LED illumination. The single-sided lighting configuration offers the same feedback circuitry to maintain constant luminous flux from the lamps as found in other MIB products. The lights in the MIB-140™ series can be positioned closely to each other or further apart to allow a narrow or wider illumination pattern. The lamps are separated from the inspection chamber with an acrylic diffuser panel. The light intensity with the inspection chamber can be changed by altering the light transmission properties of the diffusing material. The typical intensity in the center of the inspection chamber ranges from 2,500 Lux to 10,000 Lux.

The design of the MIB-140™ permits a small foot print for the benchtop as well as providing easy access to the LED lamps. The light intensity can also be adjusted with the "Master Intensity Control" located on the front of the MIB-140™ enclosure. A small indicator lamp provides feedback of the MIB-140™ operation, when illuminated it indicates that the booth is functioning properly.

MIB-140™ Single-Sided Top Lighting

flexible solutions for your inspection needs

MIB-140™ DESIGN BENEFITS

The lighting system uses an advanced lighting controller with lamp monitoring feedback to maintain constant light intensity for the life of the LED lighting modules. As the LEDs age, the lighting system will automatically adjust the current to keep the lamp output at the user specified intensity. The lighting controllers drive the LED modules at a constant voltage and variable current to provide "**flicker-free**" lighting inside the inspection chamber. The light intensity in the inspection volume can be adjusted between 2,500 and 10,000 Lux. The standard configuration implements a low glare white / black background that measures 22" wide x 16" high, divided equally between the white / black panels. The background is replaceable and is easily removed if damaged. The background is available in all white, all black or the more common white / black.

The MIB-140™ product is superior to similar lighting configurations because it offers two regulated LED lamps for illumination that are properly positioned within a well controlled environment as compared to other single-sided lighting booths. The Light Intensity Map shown to the right represents the standard configuration MIB-140™ adjusted to 3.750 Lux at the center. The light intensity map has the familiar "water-fall" characteristics found in single-sided lighting inspection booth but it is less pronounced and much more uniform near and below the vertical midpoint. This permits the inspector more freedom in positioning the product during the normal inspection procedure.

MIB-40™ Intensity vs. Distance from Lamps
(348 ft-cd [3750 Lux] at Center of Booth)
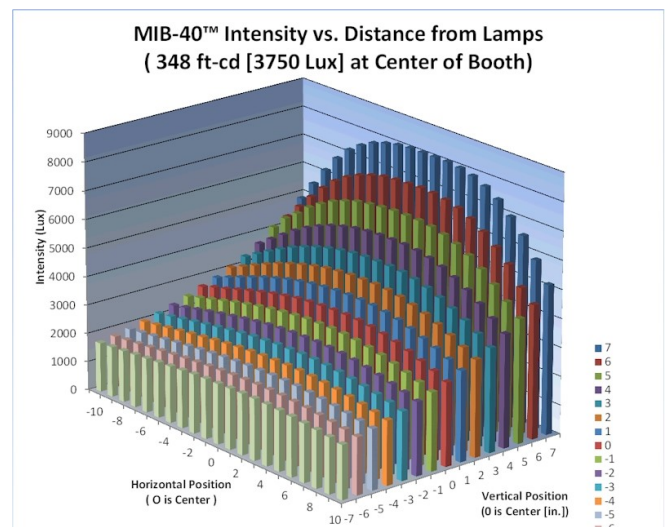
MIB-140™
Standard Components

The MIB-140™ includes all of the features as standard equipment, all you have to provide is power.

Master Intensity Control:

The Master Intensity Control is provided by the LED3622 Lighting Controller and photo-diode feedback circuitry. It is used for precise adjustment of the light intensity. The system is designed to hold the light intensity at the booth center to ±100 Lux of the target value.

Lamps in Regulation:

The advanced power supply of the MIB-140™ monitors the lamps over 500 times per second. A visual indicator is provided on the front panel to show proper operation of the system.

Master Power Switch:

The MIB-140™ Series Master Power Switch is conveniently located on the front panel. The system should be powered off when not in use or lamp replacement is required.

Lamp Access Door:

The lamps of the MIB-140™ and MIB-145™ can be replaced when required. The front panel folds down to provide access to the LED lamps and Diffusers. No tools are required for Diffuser removal.

Replaceable Backgrounds:

The background of the MIB-140™ can be replaced if it is damaged. The background is attached to the back wall of the MIB-140™ with Velcro or optional magnetic fasteners for easy removal. The large Black / White panels have a non-glare finish and can be wiped clean using IPA.

Digital Intensity Control:

This is a new option for the MIB-140™ that allows the user to simply input the desired intensity value for the center of the booth and the system will go to that intensity. This option is only available on the MIB-140D™ (Version 1.1 or later).

This option requires the addition of a PLC and Operator Interface Touch Screen, this option must be ordered at the time of system fabrication.
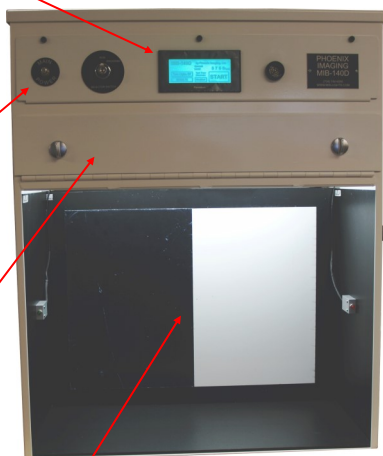
MIB-140D™ Model is shown

Primary Model Differences:

The MIB-140™ includes a PLC that controls the Pacer option and the digital light control. A small operator interface is used to set pacer timing values and to select the desired Lux output.   The system is calibrated to provide the desired intensity at the center of the inspection volume. The light intensity of the MIB-140™ can only be modified in the "Program Mode" selected by a Key Switch.
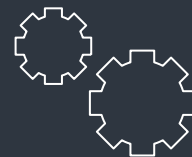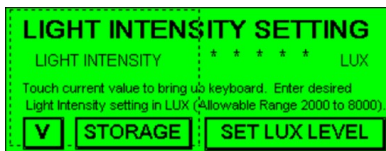
CUSTOM SOLUTIONS

Not all manual inspection projects can be performed using standard products. Some of the applications require custom hardware or system calibration. Phoenix Imaging will work with customers to create a Custom Tailored Solution (CTS) to meet exact customer requirements for both fit and function.

CALIBRATION SERVICES

When customer service is required we offer both On-Site and On-Line whenever possible. The Calibration service provides customers with the knowledge that their lighting system has been balanced and functioning correctly.   All calibrations are performed using NIST traceable light meters and instrumentation.

EBUSINESS SOLUTIONS

Continuous product improvements often require modifications to the inspection software. Any changes to a customer's application are automatically logged in the secure project server. Any version of a customer's application is available for download upon request.
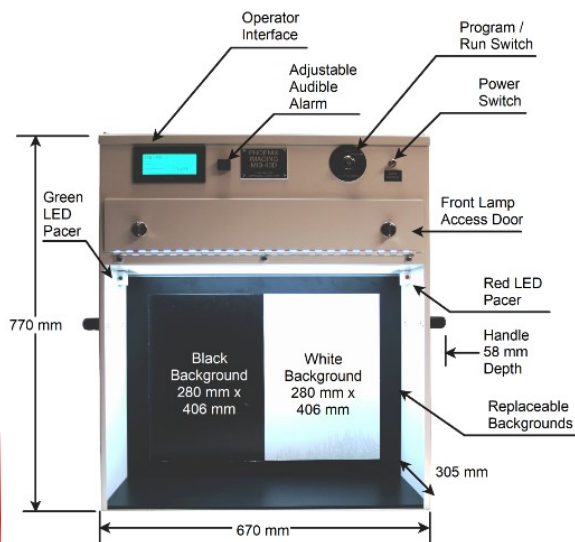
MIB-140™ Series Specifications

System Power Requirements:
115VAC, 3.0 A , 1 Ø
220VAC, 1.5 A, 1 Ø

Width (w/o Handles):	**670 mm**	**(26.3")**
Depth:	**315 mm**	**(12.5")**
Height:	**770 mm**	**(30.3")**

Operator Interface
Adjustable Audible Alarm
Program / Run Switch
Power Switch
Green LED Pacer
Front Lamp Access Door
Red LED Pacer
Handle 58 mm Depth
Replaceable Backgrounds
770 mm
Black Background 280 mm x 406 mm
White Background 280 mm x 406 mm
305 mm
670 mm

Please specify the geographical region in which the MIB-140™ will be used at the time of order. All of the MIB Lighting Controllers are now equipped with Power Factor Correction (**PFC**) to meet European and world standards for operation. The Operator Interface Display now has a built in SD slot to allow easy software upgrades. The new **Digital Intensity Control** makes changing the light intensity as simple as a push of a button. On the MIB-140D™ model.

- **MIB-150™ Dual-Sided Lighting System, Benchtop, Left-Right Light Path. Pacer PLC standard.**

- **MIB-60™ Dual-Sided LED Lighting System, Benchtop, Top-Bottom Light Path. Pacer PLC standard and Light Curtain Control (optional).**

- **MIB-180™ Dual-Sided Lighting System, Floor Standing, Top-Bottom Light Path, No PLC.**

- **MIB-190™   Dual-Sided Lighting System, Floor Standing, Top-Bottom Light Path, stainless steel arm-rest, large hooded work area, hydraulic height adjustment.**

- **MIB-200™ Dual-Sided Lighting System, Floor Standing, Top-Bottom Light Path, Corian arm-rest, PLC and Pacer Controls, (this model is the Industry Standard).**

- **MIB-170™ Dual-Sided LED Lighting System, Benchtop, Top-Bottom Light Path. Pacer PLC standard Light Curtain Control (optional).**

- **RLPS™ Referee Level Particle Standards and Challenge Sets, Cartridges, Syringes and Vials.**

Manual Inspection Solutions

That Work

Our instrument laboratory is equipped with the latest optical, illumination and image processing technology. We have designed over 500 different types of lighting modules, including Custom and Standard model s of High Frequency Fluorescent and LED lighting. A full line of advanced machine vision systems using the latest image processing technology. Whether the applications requires intelligent vision sensors or high speed multiple-core vision processors, Phoenix Imaging offers a solution for your unique application.

Phoenix Imaging offers a wide range of special machine vision tools for a wide range of applications. From simple filter paper particle counters to non-destructive in-situ vial / cartridge particle detection / measurement systems. Phoenix Imaging will offer to perform an in-depth evaluation of your project for a nominal fee. The engineering fee may be applied to the project cost if feasibility is demonstrated and the customer decides to proceed with the project.

optical gaging technology
& consulting

Phoenix Imaging
Machine Vision Systems

PHOENIX IMAGING Ltd.

MIB-140™ & MIB-145™