MIVA TECHNOLOGIES

2600 Series
LED Direct Imager

LED Direct Imaging

The Miva LED Direct Imager is the first of its kind. Miva has coupled precision optics, HD DMM and a custom designed LED Array to deliver a digitally defined, high UV power image to photo-sensitive substrates. The general approach of digitally defined projected imaging has been Miva Technologies' core competence for over 20 years with nearly 500 systems installed.

The system comes standard with two wavelengths of LED Array from a choice 375nm, 390nm or 405nm. Based on material selection Miva provides the user with the wide range of light source choices.

Miva has direct imaging systems available for feature sizes from 2.5 mil down to 3 micron using the same imaging technology.

Miva has direct imaging systems installed in PCB fabrication, microelectronics and chemical milling applications in Europe, Asia and North America.

Primary Features:

- **Multi-Spectrum LED Light Engine:** Miva's multi-wavelength LED Light Source provides choices of 375, 390, 405nm energies. The LED Array consumes far less energy, produces no heat energy and is warranted for 3 years.
- **'On the Fly' Scaling:** Scaling of substrates can be handled on a panel-by-panel basis with the selection of any number of reference points, the points are measure automatically using machine vision such that the data file may be scaled to the panel.
- **Dynamic Photo-tooling:** While the system can image soldermask directly, it can also produce phototools. The direct imager can produce solder mask phototools based to the average of the scale values predetermined during the jobs outerlayer imaging process.
- **Upgradeability:** The system is designed for maximum flexibility. Resolutions are upgradeable in the field from 5000 dpi through 32000 dpi. Light source wavelengths are upgradeable with a simple LED Array swap.
- **Lower Power Consumption:** At less than 3kW, the MIVA DI technology operates with incredible efficiency. No heat generation and no exhaust requirement means additional power savings results from reduced air conditioning and filtration for make-up air.
- **Clean Room:** Typical users of projected image technologies place the equipment in the same cleanliness level as flood exposure systems. While cleaner is better, no higher level of cleanliness is required that is found with the current imaging methodology.
- **Ease of Service:** The Miva approach to design is to keep the system robust and simple. Service contracts are not required to maintain the machine but are available.
- **Three year Warranty:** The systems' light source is warranted for 3 years. By comparison, other systems require relatively frequent light source replacement at a far higher cost.

Supported and Distributed by:
KuperTek

Kuper Technologies, LLC
PO Box 893, Concordville, PA 19331
Ph: (610)-358-5120 ● www.KuperTek.com

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Standard Resolutions and Performance:

Resolution [feature size]	2600XL	2600XS
5,000 [63 µm]	40s	85s
10,000 [25 µm]	60s	120s
20,0000 [10 µm]	120s	180s
Measurement	3s/pt	6s/pt

**Image times are Dow UD930 dry film and 18 x 24" panel

General System Performance:

A/B Registration:	± 0.50 mil [±12um]
Accuracy:	**Absolute:** ± 0.40 mil [± 10 µm] **Repeatability:** ± 0.20 mil [± 5 µm]
Imaging Media:	**Photoresists:** LDI and conventional dry film, liquids **Soldermask:** LDI soldermask **Phototools:** UV film
Maximum Image Size	Standard System: 26" x 30" [660mm x 762mm] Custom Systems: systems up to 48" x 144" installed currently
Minimum Image Size	No minimum - substrate 3"x3" [75 mm x 75mm]

Environmental Conditions:

Environment:	Typically Miva Direct Imaging Systems perform well in the same conditions as existing flood exposure conditions.
Atmosphere	70°F ± 5°F @ 50% relative humidity [20°C ± 2°C]

Data Standards:

Protocol emulations	Gerber, RS 274-X, HP-GL, Fire 9000
Optional Protocols	PostScript, TIFF, PCX, others on request
User Languages	English, German, French, Spanish
Option: Network User interface	Netlink queue and plot manager (Win XP compatible) – runs from anywhere on your host network.

Physical Dimensions:

Physical dimensions (W x D x H)	58" x 48" x 65" [1485 mm x 1220 mm x 1650 mm]
Weight (Uncrated)	1760 lbs. uncrated,
Utilities Required	Electrical: 230 VAC,50/60 Hz,3kW, 15A [filtered] Air: 60L/min @1.8 bar

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