

InfraScantm 300 TDE

The Complete **Optical Toolbox** for Failure Analysis and Debug

Optical Probing and Emission Detection in a Single Tool

The InfraScantm 300 TDE diagnostic tool is ready to go to work in your Lab. It collects the faint IR emissions from your wafer-level IC's and the weak emission signals coming from deep within the silicon of your mounted devices. The detection optics and detector sensitivity are state-of-the-art and are designed to work together to register even the smallest of signals.

In the laser-probing mode, the system senses small electrical changes in your device due to localized laser stimulation of the circuit. The GUI displays all this information in visual form in combination with data from imported CAD files. By precise overlay registration of the images, defect sites are accurately located. These capabilities add confidence in any diagnostic evaluation. The InfraScantm 300 TDE provides quick and easy correlation of the major optical diagnostic techniques in a single diagnostic tool. Mounting the device on a test platform only once saves valuable time.

Checkpoint's sensitive signal amplifier has auto-adjust features for simple operation in both the constant voltage and constant current modes. The system also links with testers for self-diagnostic tests and speed path analysis.

Applications:

Process and design Improvement: The InfraScantm 300 TDE provides Laser Stimulation methods to locate shorts, resistive path and timing issues.

Failure Analysis: The InfraScantm 300 TDE provides photo-emission detection to pinpoint problems with device leakage, forward and reversed biased junctions and oxide defects. Both laser stimulation and emission detection can be used in a single setup.

The 300 TDE Senses and Localizes various Failure Modes.



Portable design makes lab moves easier.

Console Semi S2 and CE certified

When it comes to signal detection and data handling the Infrascan 300 TDE stands out from the rest.

Features:

- Emission capability and scanning functions optically integrated on the same platform.
- Choice of InGaAs and CCD detectors.
- Precise image overlay for Emission, TIVA/LIVA and LSM images.
- Multiple laser sources for front and backside optical probing, while imaging.
- Application optimized amplifier to extract and locate the weakest signals.
- Precision scanning functions to eliminate spurious signals.
- CAD navigation with layout overlay to view your polygon transfer and defect data simultaneously.
- Joystick for an extra measure of stage control.
- Vibration isolated platform for crisp and clear images.
- Dark chamber for low noise imaging.
- Heavy-duty casters for easier system relocation.
- Three laser wavelength available, 1340nm, 1064nm and 532nm.
- Takes any 8 or 12 inch dual or single sided probe stations.
- Auto-focus control.
- Pulsed laser control for improved defect localization.

For product information and sales information contact: Checkpoint Technologies at www.checkpointtechnologies.com or call (408) 321-9780

Camera Options:

InGaAs, 640x640 array, liquid nitrogen cooled, 900nm – 1600nm response, 18µm pixel – low noise

InGaAs, 512x512 array, thermo-electric cooled, 900nm – 1600nm response.

Si CCD, 512x512 or 1024x1024 array, thermo-electric cooled, 300nm – 1100nm response.

Laser Options:

1064nm cw, 300mW, 500mW, 1W.

1340nm cw, 300mW, 500mW, 1W,

532nm cw, 50mW, 100mW,

All laser modules variable power control, 0 mW to maximum power.

ClearView[™] Diode laser to remove interference fringe effects when viewing structures

Objective lenses:

Mag.	NA	Working Dist
1X Emission	0.30	10 mm
2X	0.05	25 mm
5X	0.14	20 mm
10X	0.26	20 mm
20X	0.40	17 mm
50X	0.42	12 mm
50X	0.65	10 mm
100X	0.50	12 mm
100X	0.70	10 mm

Multi-function SIL objective, custom designed for the InfraScan[™] products, NA 2.1 – 2.6 Magnification 175X or 350X.

Electro-Optical Modulator:

Fiber-coupled modulator with controller for 532nm, 1064nm and 1340nm wavelength.

Repetition rate 100Hz – 35MHz; pulse width DC to 15 ns.

Power Requirement:

*TDE system Uses 50% less power**

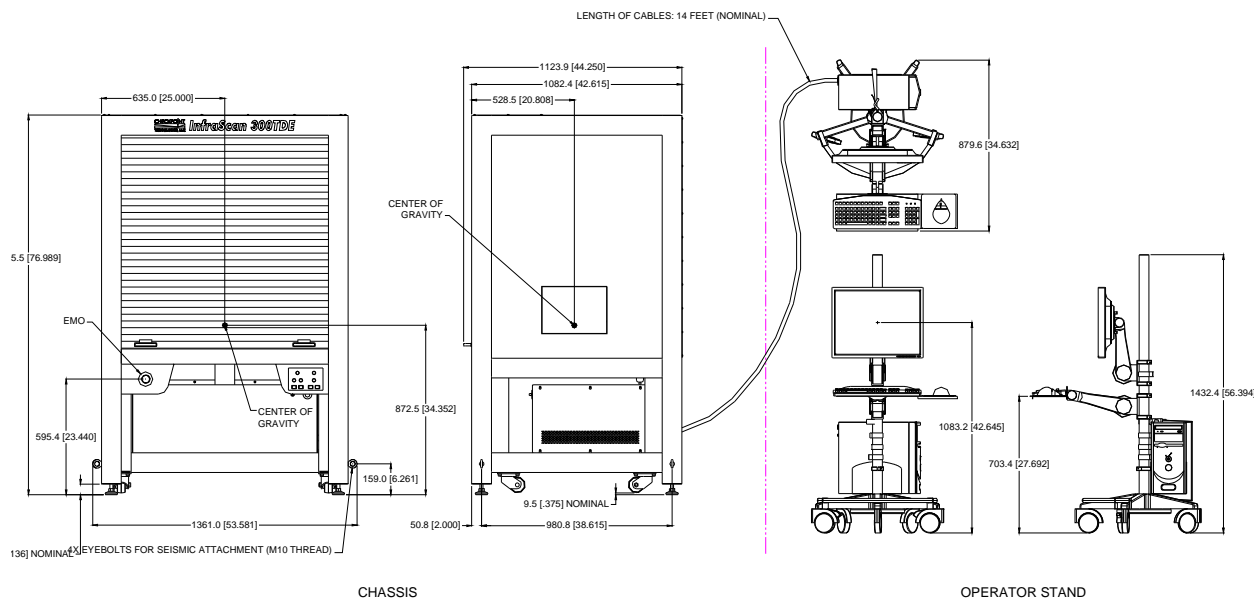
Line Voltage: 120 VAC, 50/60 Hz

Max Current: 12 Amps

CDA: 60 psi

Vacuum: 20" Hg

* Based on published data from other systems.



NOTES:

1. DIMENSIONS IN BRACKETS [] ARE IN INCHES
2. OPERATOR STAND WEIGHT: APPROXIMATELY 125 LBS



CLASS I LASER PRODUCT

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*Field proven reliability with extremely low
unscheduled down time and excellent worldwide
sales and service support*

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