LED TEST

ATX

SPECIALIST FIXTURE SOLUTIONS

## Two can provide more expertise and specialisation than one!

ATX is established specialists with extensive experience in all aspects of fixture technology. It is our aim to provide you with excellent, efficient and productive fixture performance. According to these criteria , we also search our suppliers specifically. In Feasa Enterprises we found a strong partner for the LED check tasks. The FEASA LED analyzer are an innovative, reliable and precise solution for the test of LED's on color and intensity. Compact robust and easy to implement.

Ideal solution for our Costumers.

The FEASA analyser checks for example 100 LED's in less than three seconds.

The speed of the test is dependent on the intensity of the LEDs being tested, i.e. Bright LEDs have a shorter Test Time, Dimmer LEDs have a longer Test Time. The capture (measurement) of up to 20 LEDs is done in parallel and can be achieved in times as fast as 102ms depending on the Intensity (Brightness). The data is read back from each fiber sequentially and takes approximately 5ms per fiber.

Functional Analyser (FKT)

In Circuit Test Analyser (ICT)
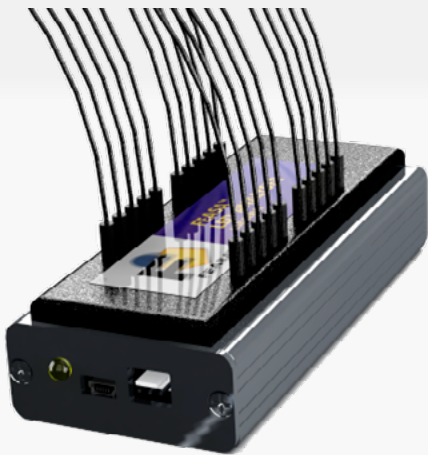
Order number	Designation
570027	Feasa 3F LED Analyser without OH's
570042	Feasa 5F LED Analyser without OH`s
570011	Feasa 10F LED Analyser without OH's
570015	Feasa 20F LED Analyser without OH's

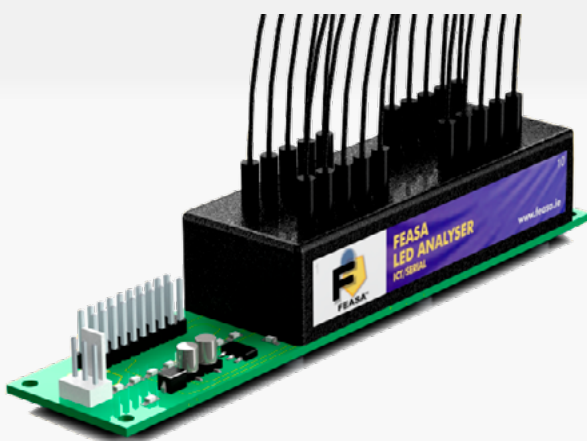| Order number	Designation
570026	Feasa 3I LED Analyser without OH-s
570028	Feasa 5I LED Analyser without OH´s
570012	Feasa 10I LED Analyser without OH's
570016	Feasa 20I LED Analyser without OH's

The FeasaTM Functional LED Analyser is available in 3, 5, 10 and 20 channel configurations. Interface to the device is via USB and RS232, and has 'Daisy Chain' capability for up to 30 analysers. The 3, 5 and 10 channel units measure 86mm x 57mm x 50mm; the 20 channel model measures 127mm x 57mm x 55mm. Each channel has a fiber length of 0.6m, the fiber has a diameter of 1.0mm including cladding, and a bend radius of 15mm.

The analyser has an operating wavelength range of 450nm to 650nm, and temperature range of 0°C to +50°C.

Output: Red, Green, Blue (RGB), Hue, Saturation, Intensity (HSI), Dominant Wavelength, CCT, CIE xy, CIE u'v' depending on interface used.

**Drivers / Software:** DLL used for Testing, Programming examples in Labview, C++

The FeasaTM In Circuit Test LED Analyser is available in 3, 5, 10 and 20 channel configurations. Interface to the device is via RS232, or a 20 Pin Addressable Port. This unit also has the capability to be 'triggered' by an external event. The 3, 5 and 10 channel units measure 100mm x 29mm x 50mm; the 20 channel model measures 140mm x 29mm x 50mm. Each channel has a fiber length of 0.6m, the fiber has a diameter of 1.0mm including cladding, and a bend radius of 15mm.

The analyser has an operating wavelength range of 450nm to 650nm, and temperature range of 0°C to +50°C.

Output: Red, Green, Blue (RGB), Hue, Saturation, Intensity (HSI), Dominant Wavelength, CCT, CIE xy, CIE u'v' depending on interface used.

Drivers / Software: Test Models for Agilent i3070, Test Code for Teradyne, DLL used for Testing, Programming examples in Labview, C++
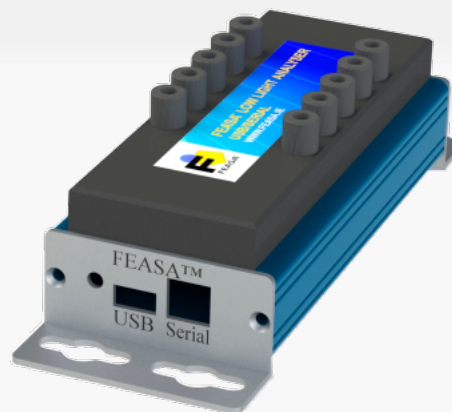
Infrared Analyser

Low Light Analyser
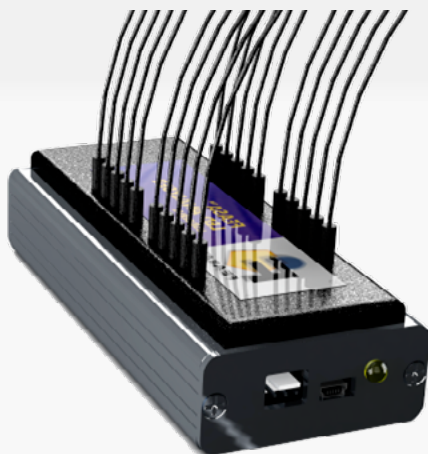
Order number	Designation
570001	Feasa 3IR Infrarot LED Analyser without OH's
570002	Feasa 10IR Infrarot LED Analyser without OH's
570018	Feasa 20IR Infrarot LED Analyser without OH's

Order number	Designation
570076	Feasa 3A LED Analyser without OH's
570077	Feasa 5A LED Analyser without OH's
570025	Feasa 6A LED Analyser without OH
570078	Feasa 10A LED Analyser without OH's

The FeasaTM Infrared LED Analyser has a unique fiber which works in conjunction with the FeasaTM IR Optical Head and is ideal for automotive, security and surveil-lance applica-tions. The IR LED Analyser is available in 3, 10 and 20 channel configurations. Interface to the device is via USB and RS232, and has 'Daisy Chain' capability for up to 30 analysers. The 3 and 10 channel units measure 86mm x 57mm x 55mm; the 20 channel model measures 127mm x 57mm x 55mm. Each channel has a fiber length of 0.6m, the fiber has a diameter of 1.04mm ± 0.03mm, and a bend radius of 50mm.

The analyser has an operating wavelength range of 700nm to 950nm, and temperature range of 0°C to +50°C. With an accuracy of ±10nm for 700nm to 900nm wavelength, and ±20nm for 900nm to 950nm; repeatability <1nm on wavelength and <1% of intensity.

The FeasaTM Low Light LED Analyser was designed for measuring LED backlit switches and panels where the light is travelling through etched or painted plastic panelling; such as on car dashboards. This analyser tests for intensity, homogeneity, xy Chromaticity, Dominant Wavelength and CCT accurately, reliably and fast.
The Low Light Analyser is available in 3, 5, 6, and 10 channel configurations. The 3, 5 and 6 channel units measure 105mm x 55mm x 50mm; the 10 channel model measures 145mm x 55mm x 50mm. Each channel has a fiber length of 0.6m, the fiber has a diame-ter of 2.2mm, including cladding, and a bend radius of 15mm.
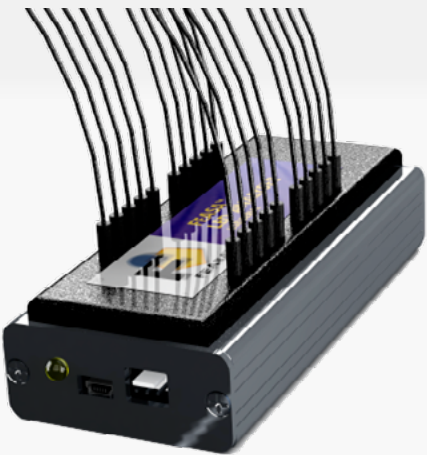
Operating from a minimum luminance of < 0.5cd/m2 and a maximum luminance of < 1000 cd/m2, and tempe-rature range of 0°C to +50°C. With accuracy of ±0.01@ x=0.33, y=0.33 and repeatability ±0.002 and <1% of intensity.

Software: GUI provided; Sample command line interface C, C++; DLL, Labview support

High Bright Analyser
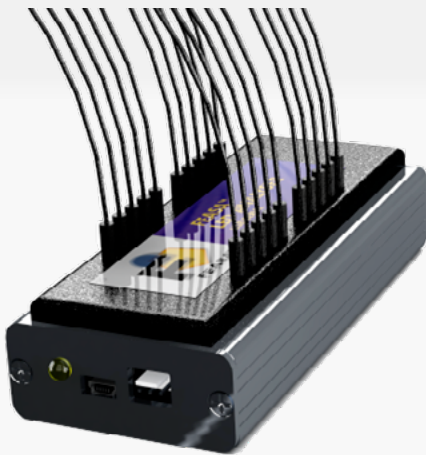
LED Life Analyser

Order number	Designation
570061	Feasa 3B High Brightness LED Analyser, without OH's
570066	Feasa 5B High Brightness LED Analyser, without OH´s
570062	Feasa 10B High Brightness LED Analyser, without OH´s
570057	Feasa 20FB High Brightness LED Analyser, without OH´s

Order number	Designation
570079	Feasa 3LT LED Life Analyser without OH´s
570080	Feasa 6LT LED Life Analyser without OH´s
570081	Feasa 10LT LED Life Analyser without OH´s
570082	Feasa 20LT LED Life Analyser without OH´s

The FeasaTM High Bright LED Analyser can measure LEDs up to 800 lumens. This analyser was developed to test LED automotive and matrix headlights in the production environment. The High Bright Analyser is suitable for testing individual LEDs as close as 1.1mm center to center, and is designed for use with Feasa's low aperture optical heads—the OH-10 and OH-11 which operate from a minimum luminous flux of 1 lumens per channel and a maximum luminous flux of 800 lumens.

The High Bright Analyser is available in 3, 5, 10, and 20 channel configurations; with models for Functional (FB) and In Circuit Testing (IB).

Available Interfaces: USB, Serial, Daisy Chain and ICT Interfaces.

Software: GUI provided; Sample command line interface C, C++; DLL, Labview support

To facilitate testing applications such as accelerated aging and LED life cycling, FeasaTM have developed a LED Analyser capable of testing LEDs at extremes of temperature. The FeasaTM LED Life Analyser System offers monitoring of LEDs from -65°C to +125°C. The fibers used in the analyser has been specially selected and prepared for use in extreme temperatures. Additionally, specific FeasaTM Optical Heads have been designed from selected materials to with-stand extreme temperatures.

The FeasaTM LED Life Analyser operates using our standard interfaces; USB, RS232 Serial . Available in 3, 5, 10 and 20 channel configurations, the FeasaTM Life Analyser also has 'Daisy Chain' functionality. The associated Test Software can continuously test LEDs at fixed time intervals, with results saved to disk for later retrieval. In addition, the software can send updates via email.

Optical Head (OH)

Order number	Designation	Scope of application
570056	Feasa OH-1 Optical Head, Dia = 3,55mm	This can be used when LEDs are located as close as 3.55mm centre to centre on a PCB.
571020	Feasa OH-2S Optical Head, Dia = 4,55mm	This can be used when there are fixturing height restrictions as it is only 30mm in length.
571016	Feasa OH-3 Optical Head, Dia = 4,55mm	Our standard Optical Head and is suitable for most applications with a centre to centre distance of 5mm.
571017	Feasa OH-4 Optical Head, Dia=4,55mm	Ideal for testing 90° or side emitting LEDs.
571019	Feasa OH-5 Optical Head, Dia = 3,55mm	Is used when LEDs are as close as 4.00mm centre to centre on a PCB.
572005	Feasa OH-6 Optical Head, Dia = 8mm	Has a large diameter, 8.00mm and is used with large diameter LEDs. Designed for testing High Brightness LEDs and LEDs with a large diameter, particularly suitable for Daytime Running Lights.
571022	Feasa Optical Head OH-7LT, Dia=4,55mm	Is designed to be used in an oven with the LED Life Tester. The temperature range of this Optical Head is -65°C to +125°C.
572010	Feasa Optical Head OH-8IR, Dia=4,55mm	Is designed to test the Intensity of Infrared LEDs in conjunction with the IR LED Analyser.
571021	Feasa Optical Head OH-9RF, Dia=6,55mm	Suitable for use in RF environments.
570071	Feasa OH-10 Optical Head (Plastic), Dia=1,00mm	Suitable for high bright LEDs on close centres; 1.3mm centre to centre.
571023	Feasa OH-11 Optical Head, Dia=0,95mm	Suitable for high bright LEDs on very close centres; 1.0mm centre to centre.
571024	Feasa OH-13 Optical Head, Dia=4,55mm	Ideal for testing Low Light LEDs particularly suitable for Backlight Switches and Panels. Designed for 2.2mm fiber to be used in conjunction with the Low Light Analyser. This requires epoxy to attach the fiber to the Optical Head.
570070	Feasa OH-16 Optical Head, Dia=10,2mm	Ideal for testing low light LEDs or LEDs with a large diameter, particularly suitable for Backlight Switches and Panels. Designed for 2.2mm fiber to be used in conjunction with the Low Light Analyser.

Legend

The FeasaTM LEGEND is a test solution for applications with large LED counts. The FeasaTM Legend system consists of two component parts, a Hub and a Satellite Analyser. The Hub can be mounted in the Test Station or in the Test Fixture and can control up to 8 Satellite Analysers. Each Satellite Analyser can test up to 20 LEDs so a fully populated Hub can test up to 160 LEDs concurrently.

Stable readings in Intensity and Common Colour Spaces: Hue, Saturation, Intensity (HSI), Dominant Wavelength, CCT, CIE xy Chromaticity.

The LEGEND has an operating wavelength range of 450nm to 650nm, and temperature range of 0°C to +50°C. The FeasaTM LEGEND is available in 60, 80, 100, 120, 140 and 160 channel configurations.

The FeasaTM LEGEND Hub measures 130mm x 55mm x 30mm; the LEGEND Analyser measures 120mm x 29mm x 50mm. Each channel has a fiber length of 0.6m, the fiber has a diameter of 1.0mm including cladding, and a bend radius of 15mm.

Drivers/ Software: DLL used for Testing, Programming examples in Labview, C++. In addition Feasa also provides a number of programmes to allow for the most efficient and appropriate use of the analyser.

Order number	Designation
570083	Feasa Legend 60 System without OH´s
570038	Feasa Legend 80 System without OH´s
570084	Feasa Legend 100 System without OH´s
570085	Feasa Legend 120 System without OH´s
570086	Feasa Legend 140 System without OH´s
570087	Feasa Legend 160 System without OH´s

Display Analyser

The Feasa Automotive Display Tester is capable of testing the luminance, chromaticity and contrast ratios of automotive displays. The Display Analyser is comprised of detector heads, fiber patch cords and a multichannel sensing module. Up to 10 channels per Display Analyser Module are available for testing. Multiple modules can be 'daisy-chained' together to increase the number of channels.

Testing parameters range from a minimum luminance of 0.01cd/m2 and a maximum luminance of 10,000 cd/m"; contrast ratio 200,000:1, display homogeneity in cd/m2 and x y chromaticity.

For an RGB backlit display @ 0.333, 0.333, the FeasaTM Display Tester is accurate in cd/m2 to <15% (±4% Illuminant A) and for xy Chromaticity ±0.01 (±0.006 Illuminant A).

With a temperature range of 0°C to +40°C, the High Bright Analyser is available in 3, 6 and 10 channel configurations. The 3 and 6 channel units measure 86mm x 57mm x 55mm; the 10 channel model measures 124mm x 57mm x 75mm. Each channel has a fiber length of 0.6m, the fiber has a diameter of 5.2mm including cladding, and a bend radius of 25mm.

Treiber / Software: GUI provided, sample command line interface C, C++ applica-tions, DLL, Labview support.

Order number	Designation
571025	Feasa Display Analyser 3D without OH´s
571026	Feasa Display Analyser 6D without OH´s
571027	Feasa Display Analyser 10D without OH´s

LED Spectrometer

The FeasaTM LED Spectrometer System was designed to measure the absolute colour and intensity of LEDs that are populated on a PCB. Various intensity and colour measurements made by the FeasaTM LED Spectrometer can be used to produce a 'golden board' which can be used as a reference for the FeasaTM LED Analyser. All measure-ments are traceable to International Standards.

The FeasaTM LED Spectrometer includes customised on-board firmware for automatic colour calculation in multiple colour spaces. It operates through a straightforward command structure and can be controlled by user programs. All measurements are easily transferred to any FeasaTM LED Analyser.

The spectrometer has a spectral range of 380nm to 780nm, with a minimum wavelength step of 0.1nm and an oper-ating temperature range of 0°C to +40°C. Traceable measurements can obtained for Luminous Flux (lumens) and wavelength, with automatic exposure control and Range Selection built in. A range of specia-lised accessories have been developed for use with the FeasaTM LED Spectrometer.

The FeasaTM Spectrometer measures 86mm x 57mm x 75mm. The spectrometer and accessories are connected via a 0.6m cable, which has a diameter of 5.1 mm inclu-ding cladding. USB operated, FeasaTM software included as standard.

Optional accessories:

Used with the FeasaTM LED Spectrometer to generate absolute and traceable measurements for :
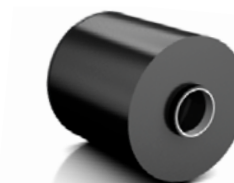
Feasa Luminance Head

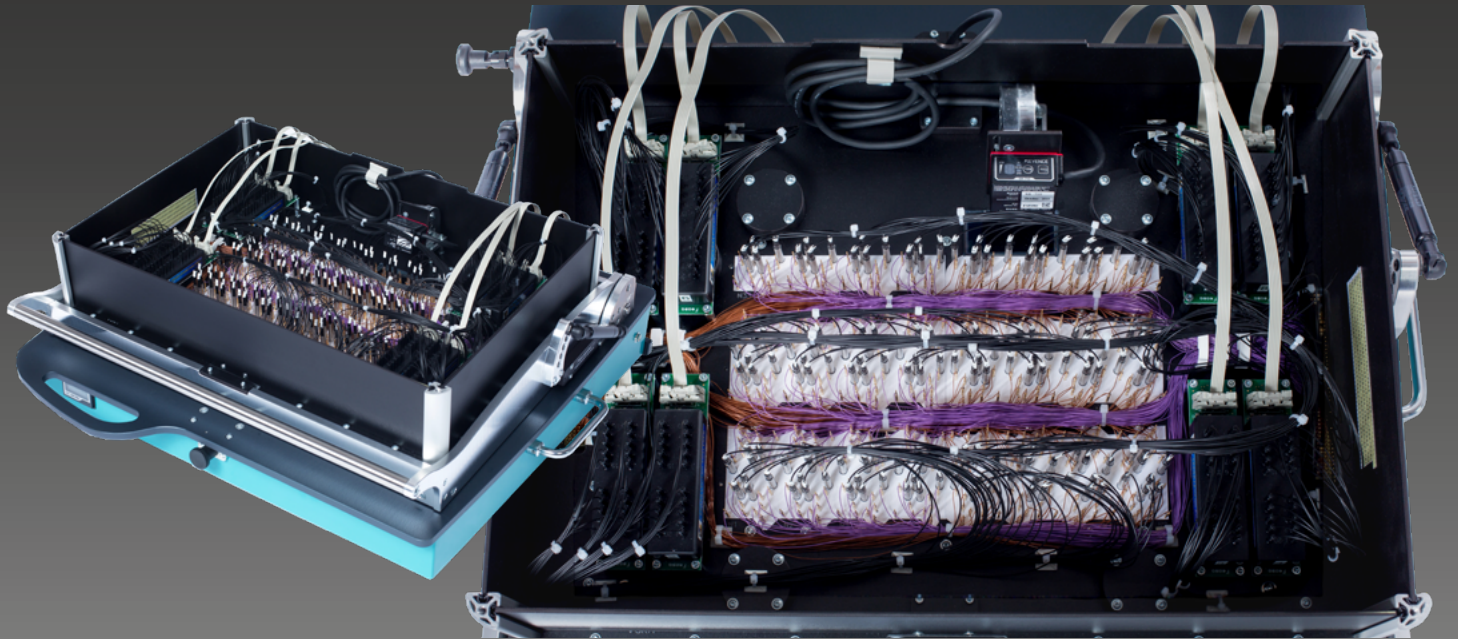Chromaticity and Luminance

Feasa Luminous Intensity Head

Chromaticity, Luminance and Radiant Intensity.

Feasa Integrating Spheres

Chromaticity, Luminous Flux and Power

Contact us

Would you like to find out more about us or get in touch with the appropriate contact person?
You´ll find the direct line on our website - together with your personal sales expert:

www.atx-hardware.de ▶ Contact

We are committed to finding the optimal technical solution for you. Why not put us to the test!

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