



FEASA™ LEGEND

The Innovative Solution for Testing LEDs

A LED TEST SOLUTION FOR APPLICATIONS WITH LARGE LED COUNTS



The Feasa LEGEND is an innovative solution which offers many advantages for applications with a large number of LEDs.

- **Dedicated Solution for LED Analysis (Hardware & Software)**
- **Stable readings in Intensity and Common Color Spaces**
 - Hue, Saturation, Intensity (HSI)
 - Dominant Wavelength
 - Correlated Color Temperature (CCT) with Δuv
 - CIE xy Chromaticity
- **Fast & Repeatable Measurements**
- **Easy Integration with Computers (USB, RS232)**
- **Multiplatform (ICT, Functional Test, R&D, Laboratory)**
- **Wide Dynamic Intensity Range allows system to measure very dim to ultra bright LEDs on the same PCB.**

The Feasa LEGEND provides an easy to use Graphical User Interface (GUI) to automatically learn and store pass/fail criteria for up to 32 different versions of boards reducing the complexity and development time of test programs.

The Feasa LEGEND systems consists of two component parts, a Hub and a LED Analyser. The Hub can be mounted in the Test Station or in the Test Fixture and can control up to 8 LED Analysers. Each LED Analyser can test up to 20 LEDs and a fully populated Hub can test up to 160 LEDs. Hubs may be added together to test a larger number of LEDs.



Feasa Enterprises Ltd.

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Registered Office: Feasa Enterprises Limited, Holland Road, National Technology Park, Castletroy, Co.Limerick, Ireland.
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OUTPUTS

<u>USB / RS232</u>	Used for P.C. Set Up - Hue, Saturation, Intensity (HSI) - Dominant Wavelength - CCT with Δuv - CIE xy
<u>10 Pin Connector</u>	Used in Remote Stand Alone Mode - Limit Selection - Pass/Fail
<u>6 Pin Ribbon Cable</u>	Used to interface the LEGEND Hub to the LEGEND Analyser

TEST TIME

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 Test Time of up to 160 LEDs is done in parallel and can be achieved in times as fast as 0.8 seconds depending on the Intensity (Brightness).

In addition, Feasa also provides a number of programmes to allow for the most efficient and appropriate use of the analyser.

APPLICATIONS

Indicator LEDs

- RJ45 Connectors
- Display Panels
- Emergency Signals
- Traffic Lights
- Railway Signals

Automotive

- Daytime Running Lights
- Brake Lights
- Centre High Mount Stop Lights
- Side Turn Signals
- Emergency Stop Signal

Interior Lights (Automotive & Avionics)

- Dashboard
- Map Lights
- Mood Lights

LCD Backlighting

- TV
- Notebook/PC
- Cell Phones/Smart Phones

Aviation Lighting

- Landing Lights

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DRIVERS/SOFTWARE

Feasa provides a comprehensive suite of Drivers and Software for ease of use.

- **DLL used for Testing**
- **Programming examples in Labview, C++**
- **Feasa Limits Set Up**

In addition, Feasa also provides a number of programmes to allow for the most efficient and appropriate use of the analyser.

Feasa Limits v0.0.37, Project: C:\Program Files\FEASA Hub\FeasaLimits\projects\WC1

File Boards Edit Limits Range Execute Statistics Select Help

Feasa™ Limits

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Current Limit Group: White LED; Limit Group 1

Glob#	Board	Designator	Hue Min	Hue Max	Sat Min	Sat Max	Int Min	Int Max	x Min	x Max	y Min	y Max	VM Min	VM Max	CCT Min	CCT Max	d Min	d Max	Range
✓ 001	1	LED1	0	0	51	71	40013	54135	0.266	0.466	0.2493	0.4493	0	0	4023	4447	-0.018	0.0012	SUPER
✓ 002	1	LED2	0	0	47	67	22912	30998	0.2793	0.4793	0.2495	0.4495	0	0	3619	3999	-0.022	-0.002	SUPER
✓ 003	1	LED3	0	0	49	69	38845	52555	0.2332	0.4332	0.2654	0.4654	0	0	5208	5756	0.0017	0.0217	SUPER
✓ 004	1	LED4	0	0	50	70	51632	69856	0.2313	0.4313	0.2574	0.4574	0	0	5272	5826	-0.001	0.0186	SUPER
✓ 005	1	LED5	0	0	50	70	41851	56621	0.2327	0.4327	0.2714	0.4714	0	0	5225	5775	0.0047	0.0247	SUPER
✓ 006	1	LED6	0	0	48	68	47560	64346	0.2667	0.4667	0.2439	0.4439	0	0	3958	4374	-0.021	-0.001	SUPER
✓ 007	1	LED7	0	0	49	69	35567	48121	0.2712	0.4712	0.2567	0.4567	0	0	3914	4326	-0.016	0.0032	SUPER
✓ 008	1	LED8	0	0	50	70	55356	74894	0.2649	0.4649	0.2503	0.4503	0	0	4064	4492	-0.017	0.0021	SUPER
✓ 009	1	LED9	0	0	50	70	51530	69716	0.233	0.433	0.2686	0.4686	0	0	5214	5762	0.0033	0.0233	SUPER
✓ 010	1	LED10	0	0	49	69	45469	61517	0.2325	0.4325	0.2634	0.4634	0	0	5231	5781	0.001	0.021	SUPER
✓ 011	2	LED1	0	0	48	68	47339	64047	0.2676	0.4676	0.2448	0.4448	0	0	3937	4351	-0.021	-0.001	SUPER
✓ 012	2	LED2	0	0	49	69	50387	68171	0.265	0.465	0.242	0.442	0	0	4001	4423	-0.022	-0.002	SUPER
✓ 013	2	LED3	0	0	50	70	45734	61876	0.266	0.466	0.2468	0.4468	0	0	4001	4423	-0.020	-0.000	SUPER
✓ 014	2	LED4	0	0	50	70	47066	63678	0.2609	0.4609	0.248	0.448	0	0	4183	4623	-0.017	0.0022	SUPER
✓ 015	2	LED5	0	0	49	69	48750	65956	0.2307	0.4307	0.2703	0.4703	0	0	5295	5853	0.005	0.025	SUPER
✓ 016	2	LED6	0	0	48	68	50256	67994	0.2659	0.4659	0.2478	0.4478	0	0	4013	4435	-0.019	0.0004	SUPER
✓ 017	2	LED7	0	0	48	68	43089	58297	0.2686	0.4686	0.2486	0.4486	0	0	3935	4349	-0.020	-0.000	SUPER
✓ 018	2	LED8	0	0	51	71	43527	58889	0.2661	0.4661	0.242	0.442	0	0	3962	4380	-0.022	-0.002	SUPER
✓ 019	2	LED9	0	0	48	68	49994	67638	0.2326	0.4326	0.2744	0.4744	0	0	5231	5781	0.0061	0.0261	SUPER
✓ 020	2	LED10	0	0	48	68	47486	64246	0.2332	0.4332	0.2714	0.4714	0	0	5214	5762	0.0045	0.0245	SUPER

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SPECIFICATIONS

OPTICAL	
Total Operating Wavelength Range	450nm to 650nm
ACCURACY	
Dominant Wavelength (after adjustment)	± 2nm
Correlated Color Temperature (CCT)	± 200K @ 2856K
Chromaticity (after adjustment)	± 0.01 @ x=0.33, y=0.33
REPEATABILITY	
Dominant Wavelength	± 1nm
Correlated Color Temperature	± 50K @ 2856K
Chromaticity xy	± 0.0015
Hue	< 1
Saturation	< 1%
Intensity	< 1%
ELECTRICAL	
Supply Voltage	5.0V
Supply Current	200mA per 20 Channel Analyser
(Power Supply is supplied with the LEGEND)	
PHYSICAL	
Dimensions for Feasa LEGEND Hub	145mm x 54mm x 37mm
Dimensions for Feasa LEGEND Analyser	120mm x 29mm x 33mm*
Fiber Length	0.6m
Fiber Diameter	1.0mm, incl. cladding
Minimum Bend Radius of Fiber	15mm
Operating Temperature Range	0°C to +50°C
	* does not include bend radius

ORDERING INFORMATION

<u>Feasa LEGEND</u>	<u>Part Number</u>
60 Channel	Legend 60
80 Channel	Legend 80
100 Channel	Legend 100
120 Channel	Legend 120
140 Channel	Legend 140
160 Channel	Legend 160
>160 Channel	Legend >160

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