

## LED Life Evaluation using HAST Chamber became Possible !!

It became possible to measure the relative light output of LEDs exposed to high temperature, high humidity under high pressure.

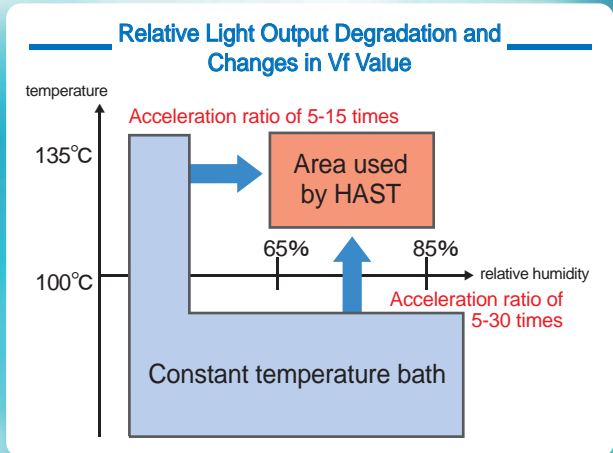
LED Life Evaluation System

# LED HAST

This system is installed in HAST chamber and is used for life evaluation of a LED.

The system is capable of evaluating the light output degradation of LED in a short period.

This system measures the light output and forward voltage ( $V_f$ ) of a LED under HAST conditions (temperature:120°C, relative humidity:85%), and evaluates the light output degradation in a short period.



※The acceleration ratio is estimated according to Arrhenius Law.

### ■ Features

A combination of the HAST chamber and LED life evaluation system enables the highly accelerated life evaluation of a LED.

- Test environment : temperature 120°C, relative humidity 85%
- Number of test channels in total : up to 40 channels  
Number of test channels per measuring device (LBU) : 8 channels  
Number of measuring devices per HAST chamber : up to 5 units
- Constant current is supplied to each test channel.  
Range of constant current : 1mA – 500mA
- The forward voltage ( $V_f$ ) can be measured along with the light output.
- The tendency of the light output degradation becomes clear within one week.
- The measurement data can be converted into a CSV format.
- The data sampling interval can be set by minutes.

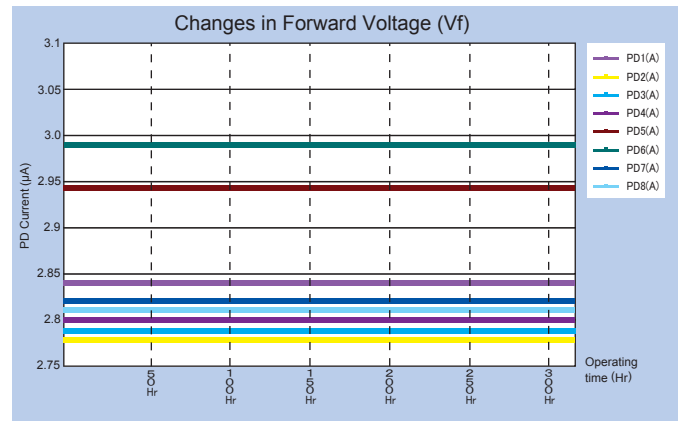
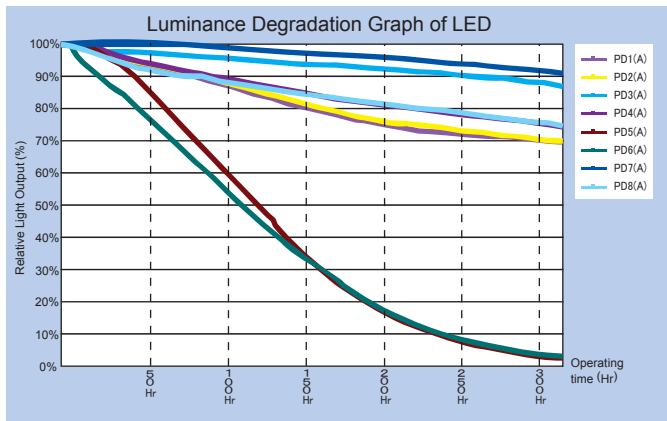


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# Forward voltage can be measured along with the light output. Up to 40 test channels are available for the evaluation of LEDs.

## A measurement data can be converted into a CSV format

The PC can import the measurement data from the measuring device via USB interface. The measurement data is stored, processed and graphed by a PC. The data sampling interval and display output can be set by minutes. (Relative light output degradation and changes in Vf)



## Hardware Structure



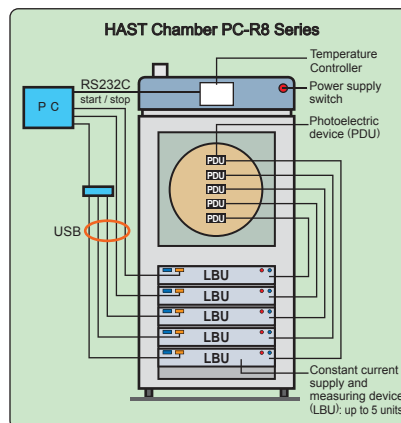
**Photodiode Device (PDU)**  
A device which can mount 8 LEDs and receive the light output with photodiodes.

**Interface Cable**  
A connection cable that connects the photodiode device with the measuring device.

**PC**  
A personal computer that can import measurement data from measuring device via USB interface. This PC controls the start, stop and programs



**Measuring Device (LBU)**  
A device which supplies constant current to each test channel, and measures light output and Vf values. The measurement data is exported to a PC via USB interface. (Number of test channels per device: 8 channels)



**HAST Chamber PC-R8 Series**  
Test environment Temperature : 120°C  
Relative humidity : 85%



## Main Specification

TYPE		L-LBU 805	L-LBU 810	L-LBU 815
Measurement Specification	Number of outputs	8 channels	8 channels	8 channels
	Output current range	0~0.5A	0~1A	0~1.5A
	Open voltage	5V	9V	9V
Output Specification	Electric current measurement of LED (If)	0~0.5A	0~1A	0~1.5A
	Forward voltage measurement of LED (Vf)	0~5V	0~9V	0~9V

**HAST Chamber PC-242HSR2**



Specifications and appearance are subject to change without notice due to continuous product improvement.



Manufacturer : **HIRAYAMA** Manufacturing Corp.

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Manufactured under ISO 9001 / 13485 / 14001

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