SAFETY ANZEN

Tester for Low Beam

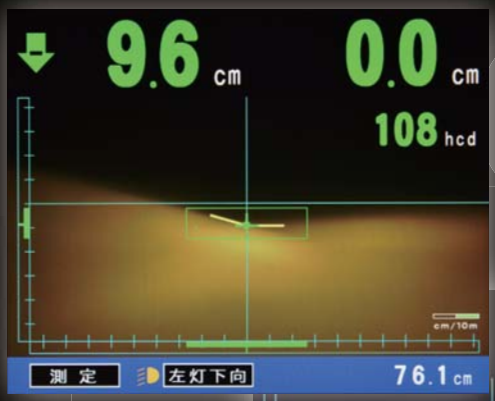
Color Image Processing Fully Automatic Headlight Tester

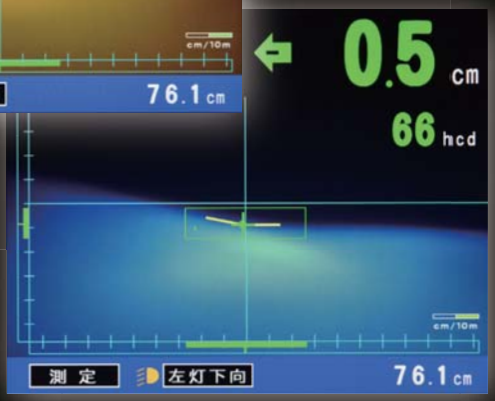
Real color Image Processing HEADLIGHT TESTER

MODEL **HLI-2015**

color

Evolving Image Processing





Real color
Color CCD Camera

High performance headlight tester equipped with a color CCD camera to determine the color shade that supports various lights and light sources

Color

Latest Technology RGB Color Method

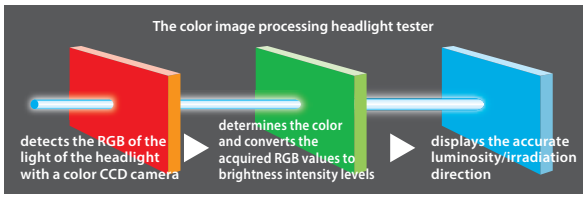
Color Analysis Close to That of Human Eyes Has Been Achieved

[Color Image Processing Headlight Tester]

Can perform analysis close to that of human eyes by taking advantage of the characteristics of a color camera to determine the color shade of the light from the balance of the RGB values. It can accurately determine the light distribution form and color shade of light sources ranging from the red light source of a halogen lamp to the blue light sources of HID and LED lights. It can also reliably support new light sources.

Evolving Image Processing Method

The color image processing method supports lights that are becoming more diverse. It enables accurate measurement. Conventional image processing headlight testers have performed measurement by capturing the light of the headlight with a monochrome CCD camera.
The color image processing headlight tester recognizes the accurate light distribution of the light from the image captured with a color CCD camera in order to support new light sources and their light distributions which are becoming more diverse. It strongly supports the measurement and adjustment work of customers.

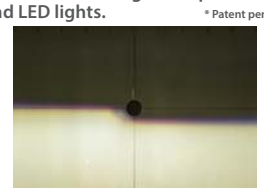


Using Latest Technology RGB Color Method

It can perform analysis close to that of human eyes by taking advantage of the characteristics of a color camera to determine the color shade from the RGB values*. It can accurately measure light sources ranging from the red light source of a halogen lamp to the blue (white) light sources of HID and LED lights.

* Patent pending


Red light source (halogen lamp)


Blue [white] light sources (HID/LED)

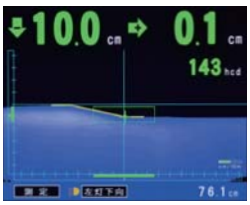
Reliable Support for All Headlights!

Reliable support for light distribution patterns such as those of a Z-beam and various new light sources such as HID and LED increases the work range.

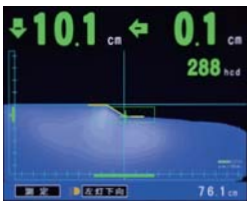
Low beam	Light distribution pattern of a Z-beam, etc.
New light sources such as HID and LED	Fog light

Proposal Service Realized

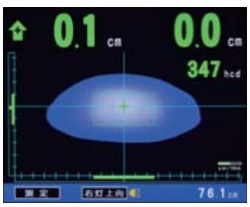
The image of the light distribution pattern of various lights is processed and the irradiation direction and luminosity are displayed instantly. Proposal service that can persuade customers can be realized.



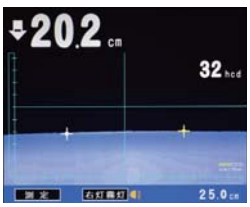
Normal cutline



Z-beam



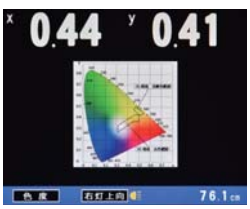
High beam



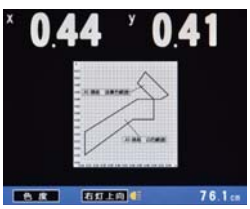
Fog light

Chromaticity Display Function to Allow You to Easily Determine the Color Shade of Light Added

The function can display the CIE chromaticity diagram and JIS chromaticity range table.
The color shade of the light can be used as a criterion, which also can be used to explain to your customer.



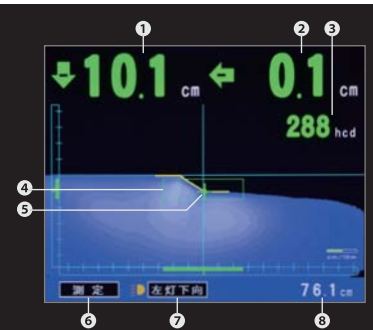
Chromaticity display screen (CIE chromaticity diagram)



JIS chromaticity screen (JIS Z8701)

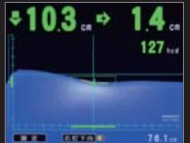
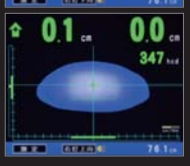
Picture

Variety of Measurement Modes



❶ Irradiation direction high/low positions
❷ Irradiation direction left/right positions
❸ Luminosity
❹ Pass range
❺ Elbow point
❻ Mode display (Measurement or alignment)
❼ Light information during measurement is displayed
❽ Light mounting height

A variety of measurement modes are available to meet various measurement requirements. The measurement modes support all lights and display the measurement results in an easy-to-view and easy-to-understand manner. The modes can be switched with operation buttons.

	Gradation processing mode	Target processing mode	Adjust mode
Low beam (downward)			
High beam (upward)			This adjustment mode is used when the target fluctuates in the low-beam light measurement mode. This adjustment function is used to fix a fluctuating target to visually align the elbow point with the target.
	The gradation of the headlight image captured with the camera is processed and displayed.	The headlight image captured with the camera is not displayed and only the target (elbow point) is displayed.	

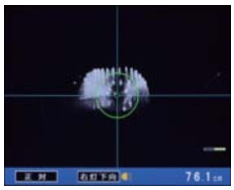
Speed Stress-free Quick Measurement

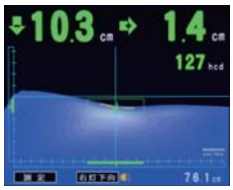
Instant Alignment and Measurement

Quicker and More Accurately

The previous tester detected the light center from the brightest part of the light to align with it.
This tester instantly determines the representative light form (multi-reflector projector) by subdividing the measurement logic. It detects the light center from the form to increase the alignment speed. The work efficiency has been substantially increased.

Aligning → Instant measurement after alignment → Measurement completed

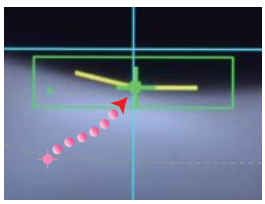




Since the center of the light source of the headlight is determined accurately, the light receiver does not move even if the irradiation direction changes during adjustment work. The adjustment work can be performed smoothly without any unnecessary movement.

Arbitrary Adjustment

The adjustment work is completed by just moving the target (cross mark) within the square pass range frame. The work can be performed easily without relying on intuition or a number. Once the target enters the square pass range frame, a double-size image is automatically displayed to facilitate the adjustment work.



Just Move the Target within the Pass Range Frame

Easy-to-read Measurement Results Screen

Measurement results can be checked all at once on the measurement results screen. Measurement data can be stored by pressing an operation button so work efficiency is substantially improved.

測定結果	右灯	左灯
高さ	76.1	76.1
上向 上下	0.0	0.0
上向 左右	0.0	0.0
上向 光度	0	0
下向 上下	下 10.3	下 8.3
下向 左右	左 1.1	左 5.4
下向 光度	118	144

Low-beam light/high-beam light measurement results screen

測定結果	右灯	左灯
高さ	76.1	76.1
霧灯 上下	下 19.9	下 21.6
霧灯 左右		
霧灯 光度	27	27

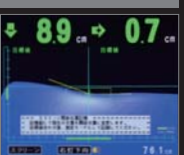
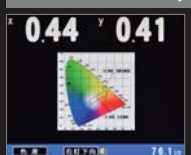
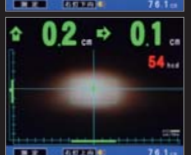
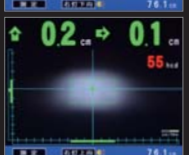
Fog light measurement results screen

Real color Color CCD Camera

Useful Functions

■ Adjust Mode
The target can be moved to any position for a special light for which the elbow point is hard to acquire. When the position is determined, the optical axis can be adjusted as the target follows during light adjustment.

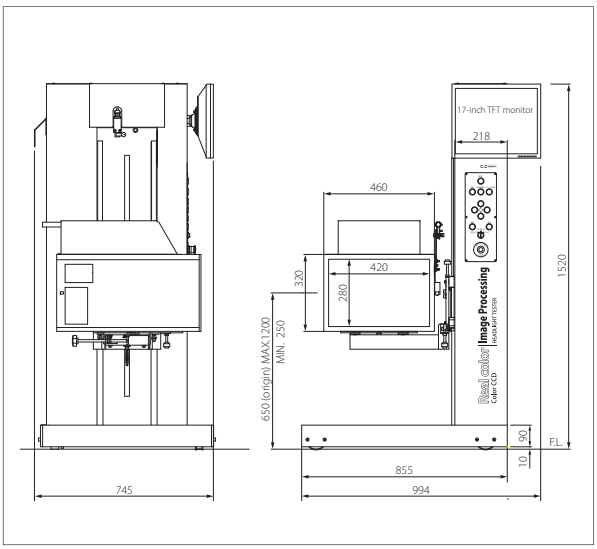
■ Screen Mode
Adjustment to an arbitrary position can be performed by placing the virtual cutline (adjustment target) and aligning the light image with it.

Screen mode	Chromaticity display mode	Light alignment mode	Raw image color mode	Raw image monochrome mode	Binarization processing mode
					
Setting the irradiation direction arbitrarily fixes the cutoff line to the target position. This function can adjust the light to align it with the cutoff line.					
This function can easily determine the color shade of the light under measurement. * The chromaticity display mode changes alternately each time the operation button is pressed.		The function displays the entire headlight image captured with the camera.	The headlight image captured with the camera is displayed without processing the image.		The headlight image captured with the camera is binarized (white and black) and displayed.

■ Specifications

Model				HLI-2015
MLIT registered model				HLI-2015
Model test number				JASEA-H-39
Measurement method				Automatic/light condensation
Measurement distance			(m)	1
Light mounting height measurement range			(cm)	25~120
Measurement range	Luminosity	High-beam light	(hcd)	0~1,200
		Low-beam light	(hcd)	0~1,200
		Fog light	(hcd)	0~1,200
	High-beam light/low-beam light		(cm/10m)	20 / 35 — 35 / 35 (High / Left — Right / Low)
	Fog light			High 10.0 to 0 to low 35.0
Display method	Luminosity/irradiation direction			LCD digital
	Light distribution/alignment			Image/optical
	Power supply		(v)	AC100 (5A 50/60Hz)
	Tester dimensions		(mm)	W994×D745×H1,520
	Tester weight		(kg)	Approx. 170
	Standard accessories			Auxiliary light cover x1, light receiver cover x1, convex rule x1
	Rail dimensions		(mm)	W600×L4,500/5,500

■ External Dimensions



Forward and Backward Moving Device
(Specially manufactured device)
■ The tester automatically detects the distance to the headlight of the vehicle and this device can move the tester forward or backward to the measurement distance (1 m). ■ Since the measurement can be taken without moving the vehicle, the work efficiency can be improved. ■ The vehicle inspection line space also can be saved by using this device in conjunction with the 4WD-BS tester. * For details, please contact one of our sales offices.

Vehicle Alignment Laser Pointer
CD: 01210152

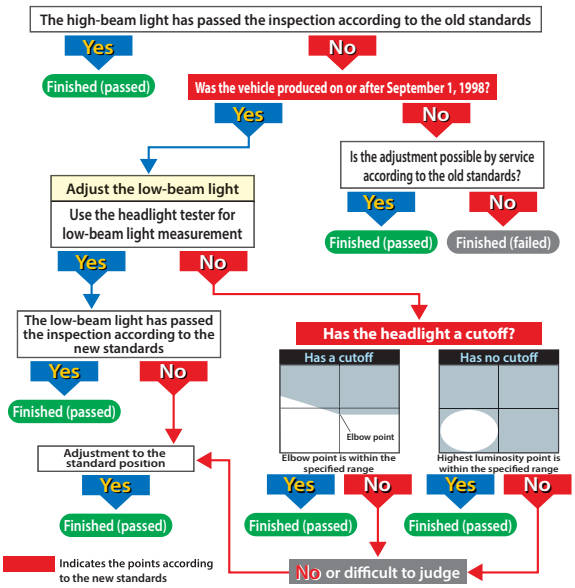
Protection Fence
CD: 01210615

Response to New Standards as a Result of Revised Safety Standards for the Headlights

As a result of the establishment of safety standards details by notification in the official gazette, the inspection method of the headlights was changed effective September 1, 1998, so the measurement of the low-beam was added to the current measurement of the high-beam so that the headlights are inspected by measuring the high-beam and low-beam.

If the inspection fails, the reinspection must be performed according to the new standards.
- If the vehicle was produced on or before August 31, 1998, the high-beam light must be reinspected
- If the vehicle was produced on or after September 1, 1998, the low-beam light must be reinspected.

Inspection Flow at Service Shop



■ Before using this product, carefully read the precautions indicated by ⚠DANGER, ⚠WARNING, and ⚠CAUTION in the manual supplied with this product to ensure correct use.

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