

# Product Information

## Gel-Bright™ Laser Diode Gel Illuminator

### Contents

Component
E90005A: Gel-Bright™ Laser Diode Gel Illuminator
E90005B: Gel-Bright™ Imaging Hood

### Gel-Bright™ Laser Diode Gel Illuminator Specifications

General Dimensions (W x D x H)	7.1 x 9.5 x 4.3 inches (18 x 24 x 11 cm)
Gel Stage Dimensions (W x D)	5.5 x 5.1 inches (14 x 13 cm)
Voltage Input	100~240 V (converter included)

A universal outlet adaptor is provided for customers outside of North America. This product has a CE marking.

### Safety Information

The Gel-Bright™ Laser Diode Gel Illuminator is an electrical device. Plug the power cord into a properly grounded electrical outlet. Disconnect device from the electrical outlet before cleaning it. The Gel-Bright™ Laser Diode Gel Illuminator is not waterproof. Do not submerge the unit in water, or add any liquids to the gel staging area. The device contains class 3b laser diodes; safety glasses are not required during routine use because the amount of laser light that could enter the eye's pupil is below the CDRH limits.

### Product Description

The Gel-Bright™ Laser Diode Gel Illuminator is a non-UV illuminator for visualizing fluorescent nucleic acid and protein gels. It offers comparable performance to UV transilluminators while avoiding the hazards of UV light which can damage skin and eyes. UV light can also induce cross-linking and nicking of DNA in samples. Unlike blue LED gel imagers such as Dark Reader or Safe Imager™ that are not compatible with red dyes, the Gel-Bright™ works well with both green dyes and widely used red dyes like GelRed®, ethidium bromide (EtBr), and One-Step Lumitein™ Protein Gel Stain. Additional compatible fluorescent dyes are listed on the right.

The gel viewing area of the Gel-Bright™ illuminator contains 12 green laser diode lights around the periphery of the gel box, casting light at a 45° angle to ensure even illumination. Above the gel box is an adjustable mounted amber filter that allows the visualization of the fluorescent signal. The filter can be tilted to multiple positions using the filter adjustment slider (Figure 1B-D). This allows for easy access to the gel during processes like band excision in the upright position (Figure 1D), and a convenient platform for viewing or imaging results in the lowered position (Figure 1A). A Gel-Bright™ Imaging Hood is included as a convenient accessory for imaging your gel with a cell phone camera, or other device (Figure 2).

### Features:

- Novel green laser diode illumination, for excellent performance with both green and red dyes
- Brighter signal than UV transilluminators for green dyes such as GelGreen®
- Works well with red dyes such as GelRed® and EtBr, unlike blue LED imagers
- Eliminates UV light hazards for both the user and DNA samples
- Optimized lighting angle for even illumination, with adjustable light intensity
- Amber filter gives optimal signal to background ratio
- Multi-hinged amber filter for flexible angle and height positioning
- Ergonomically designed for easy access to the gel for gel slice excision
- Compact and portable design occupies minimal space on benchtops

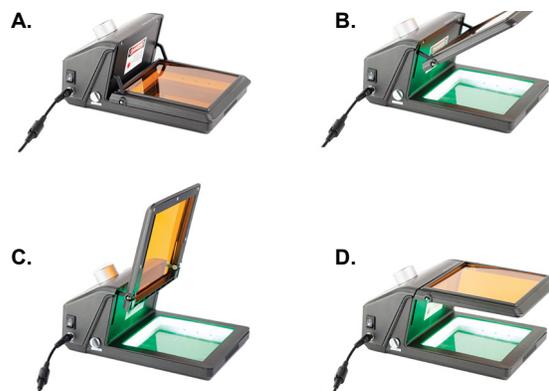


Figure 1. Gel-Bright™ Laser Diode Gel Illuminator.



Figure 2. Placement of Gel-Bright™ Imaging Hood on device.

### Compatible Dyes:

- GelGreen® and GelRed® Nucleic Acid Gel Stains
- EMBER500™ RNA Prestain Loading Dye
- SYBR® Green, SYBR® Safe, SYBR® Gold and similar dyes
- Ethidium Bromide (EtBr)
- EvaGreen® qPCR Dye (direct detection of EvaGreen® PCR products)
- One-Step Lumitein™ and SYPRO® Ruby Protein Gel Stains

### Protocol for Use

1. Run a gel according to your standard protocol and stain it with a fluorescent stain, such as GelRed® or GelGreen®.
2. Place the provided glass plate into the gel staging area. Place the stained gel on the glass plate.
3. Turn on the Gel-Bright™ device and turn the Light Intensity Dial clockwise (Figure 3) until the desired light intensity is attained.
4. View the gel through the amber filter. For best results do this in a dimly lit or dark room.

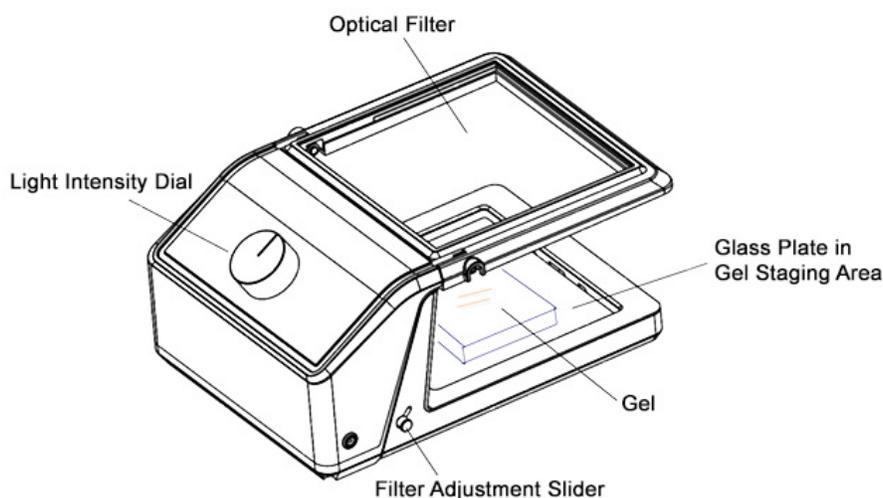


Figure 3. Diagram of Gel-Bright™ Laser Diode Gel Illuminator.

- The gel can be photographed with a regular camera while the filter is in the lowered position (see Figure 1A). To adjust the position of the filter, slide the Filter Adjustment Slider (Figure 3) up at a 45° angle towards the filter, and then lower the filter. For best results, we recommend imaging the gel with the included Gel-Bright™ Imaging Hood, which provides a dark enclosure over the filter for optimal contrast. The imaging hood should be placed over the filter while it's in the lowered position (Figure 2). The gel can be imaged through the small opening at the top of the imaging hood using a camera or smart phone. Align the camera lens flat against the round opening to take a photograph.

**Note:** The Gel-Bright™ Imaging Hood can also be purchased as a stand-alone accessory (see Related Products).

- When excising gel slices, the amber filter can be angled up for better access to the gel (see Figure 1B), or alternatively, the device may be turned around to gain access from the back of the device.

**Notes:**

- Avoid looking directly into the laser diodes when the filter is lifted.
- When excising gel slices ALWAYS position the glass plate under the gel, as sharp blades will scratch the lower surface of the gel staging area.
- To turn the device off, turn the Light Intensity Dial counter-clockwise until the lasers turn off. Press the on/off switch into the off position.

**Warranty**

Biotium warrants that this product will be free from defects in material and workmanship for a period of two (2) years from date of purchase. If a defect is present, Biotium will, at its discretion, repair, replace, or refund the purchase price of this product at no charge to you, provided it is returned during the warranty period. This warranty does not apply if the product has been damaged by accident, abuse, misuse, misapplication, or from ordinary wear and tear. For your protection, items being returned must be insured against possible damage or loss. Biotium cannot be responsible for damage incurred during shipment of a repair instrument. It is recommended that you save the original packing material in which the instrument was shipped. This warranty shall be limited to the replacement of defective products. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY.

**Obtaining Service**

Contact Biotium Technical Support at 800-304-5357 or send an email to techsupport@biotium.com and describe the problem(s) you are experiencing. Carry out any suggested modifications or tests. DO NOT ship a device to us without first obtaining a Return Authorization from us. If it is determined by the Biotium Technical Support representative that the device should be returned for repair, a Return Authorization number will be assigned and you will receive instructions for the return. If the device is under warranty, Biotium will repair or replace the unit, and pay for return shipment. If the device is not under warranty, Biotium will give you a cost estimate before repairing the unit. Repair and shipping costs both ways are your responsibility if the device is not under warranty.

**Related Products**

Cat. No.	Product
E90005B	Gel-Bright™ Imaging Hood
41003	GelRed® Nucleic Acid Gel Stain, 10,000X in Water
41001	GelRed® Nucleic Acid Gel Stain, 3X in Water
41011	GelRed® Prestain Plus 6X DNA Loading Dye
41029	GelRed® Agarose LE
41005	GelGreen® Nucleic Acid Gel Stain, 10,000X in Water
41030	GelGreen® Agarose LE
41020	DNAzure™ Blue Nucleic Acid Gel Stain
41032	EMBER500™ RNA Prestain Loading Dye
40086	Thiazole Green (SYBR® Green I), 10,000X in DMSO
31019	EvaGreen® Dye, 2000X in DMSO
40042	Ethidium Bromide, 10 mg/mL in Water
21004-1L	One-Step Lumitein™ Protein Gel Stain
41008-T	PAGE GelRed® Nucleic Acid Gel Stain, 10,000X in Water
31022	Ready-to-Use 1 kb DNA Ladder
31032	Ready-to-Use 100 bp DNA Ladder
41006	TBE Buffer, 5X
41028	Agarose LE, Ultra-Pure Molecular Biology Grade
31028	AccuClear® Ultra High Sensitivity dsDNA Quantitation Kit with 7 DNA Standards
31066	AccuGreen™ High Sensitivity dsDNA Quantitation Kit (for Qubit®)
31041, 31042	Forget-Me-Not™ qPCR Master Mix (2-Color Tracking)
31043, 31044	Forget-Me-Not™ Universal Probe qPCR Master Mix
40069	PMAxx™ Dye, for Viability PCR
E90006	PMA-Lite™ 2.0 LED Photolysis Device

Please visit our website at [www.biotium.com](http://www.biotium.com) for information on our life science research products, including environmentally friendly EvaGreen® qPCR master mixes, fluorescent CF® Dye antibody conjugates and reactive dyes, apoptosis reagents, fluorescent probes, and kits for cell biology research.

SYBR, SYPRO, and Qubit are registered trademarks of Thermo Fisher Scientific.

Materials from Biotium are sold for research use only, and are not intended for food, drug, household, or cosmetic use.