CHOYANG MEDICS

DUV-COMBO

DIGITAL PHOTOTHERAPY SYSTEM

Innovation · High Power · Reliability

DUV-COMBO, developed by CHOYANG MEDICS, is an LED-based UV phototherapy system with two dedicated handpieces: UVB and UVA1. By integrating two UV wavelengths into a single platform, DUV-COMBO provides controlled and targeted UV irradiation in a compact system designed for professional dermatology practice.

DUV-COMBO

U.S. FDA 510(k)-cleared (K254234).

DUV-COMBO

Korean medical device product certification.

CHOYANG MEDICS

ISO 13485-certified quality management system.



SYSTEM FEATURES

DIGITAL PHOTOTHERAPY SYSTEM

Dedicated UVB and UVA1 handpieces

DUV-COMBO combines two UV wavelengths, UVB and UVA1, in a single platform. The dedicated UVB and UVA1 LED handpieces can be selected individually to deliver controlled and targeted phototherapy in professional dermatology practice.



Effective irradiation treatment area

Effective irradiation area: **42 cm² (6 × 7 cm)**

High irradiance

Irradiance specification:
UVB: 100 mW/cm² at 2 cm
UVA1: 200 mW/cm² at 2 cm

Built-in UVB MED test mode

Six preset exposure levels support clinician assessment of the Minimum Erythema Dose (MED).

Designed for clinical use

An emergency switch enables manual power cut-off in an emergency, and built-in sensors support UV output monitoring.

Built-in output calibration

Integrated UVA1 and UVB sensors support output measurement and calibration.

No routine UV lamp replacement

The LED light source does not require routine replacement. Routine output checks and calibration are required.

Output monitoring

Built-in sensors enable UV output measurement and monitoring.



CLINICAL INFORMATION

DIGITAL PHOTOTHERAPY SYSTEM

- **Psoriasis**
- **Atopic dermatitis**
- **Leukoderma** (UVB channel)
- **Vitiligo**
- **Seborrheic dermatitis**
- **Alopecia areata**



Psoriasis



Vitiligo



Atopic dermatitis



Seborrheic dermatitis

Illustrative examples of the listed skin conditions.

What is UVA1 therapy?

The following section provides general background on UVA1 phototherapy.

UVA1 is the long-wavelength region of ultraviolet A (UVA) radiation, generally defined as 340-400 nm. Due to its longer wavelength, UVA1 penetrates more deeply into the skin than UVB, reaching the dermal layers.

Exposure to UVA1 is associated with various photochemical and cellular responses. One of its important photobiological characteristics is the generation of reactive oxygen species (ROS), which can influence cellular signaling and biological activity within the skin.

UVA1 can also interact with cells in the dermis, including immune cells, inflammatory cells, and fibroblasts. These interactions are associated with modulation of inflammatory and immune responses, as well as changes in cellular activity within the dermal tissue.

Because of these distinct photobiological characteristics and this deeper penetration into the skin, UVA1 has been studied and used as a phototherapy modality in dermatology.

As with all ultraviolet phototherapy, appropriate treatment parameters and UV protection should be considered. Treatment should be performed under the supervision of a qualified healthcare professional.

Treatment parameters and scheduling are individualized by the treating healthcare professional according to the patient's condition and response.

Safety information

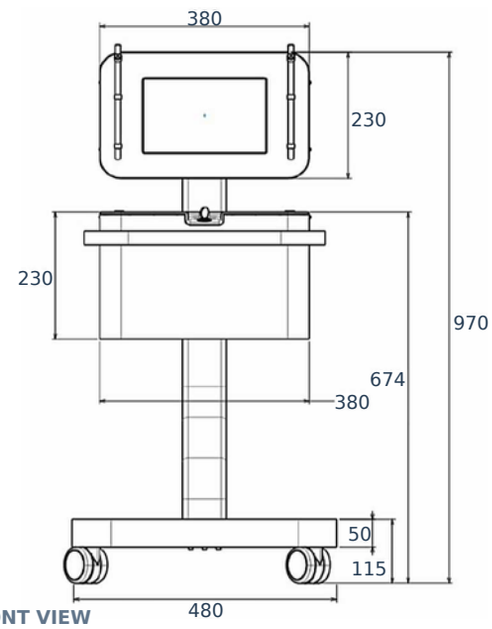
Patients and operators must wear appropriate UV-protective eyewear during irradiation. Excessive UV exposure may cause skin burns and eye injury. Repeated UV exposure may cause premature skin aging and increase the risk of skin cancer.

Do not use in patients with porphyria, lupus erythematosus with erythema, or current or previous skin cancer. Before treatment, assess patient suitability, including UV sensitivity and medication-related photosensitivity, and observe the contraindications and precautions in the Instructions for Use. Read the Instructions for Use before operating the device.

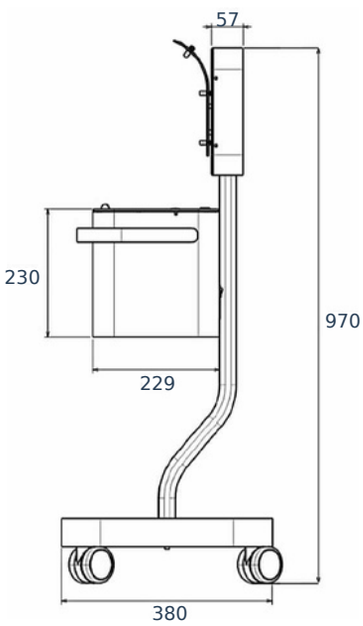
TECHNICAL SPECIFICATIONS

DIGITAL PHOTOTHERAPY SYSTEM

Light source	Light-emitting Diode (LED)
Emission range	UVB: 300-320 nm (peak 308.8 nm) UVA1: 360-390 nm (peak 371.3 nm)
Maximum irradiance	UVB: 100 mW/cm² at 2 cm UVA1: 200 mW/cm² at 2 cm
Dose range (energy density)	UVB: 0.05-3.4 J/cm² UVA1: 0.1-3.4 J/cm²
Maximum treatment area	42 cm² (6 × 7 cm)
Display	10.2-inch Color Touch Screen
Rated input	100-240 V, 50/60 Hz
Rated apparent power	147 VA
Dimensions	Main unit: 480 mm × 380 mm × 970 mm Handpiece: 264 mm × 88 mm × 124 mm
Weight	Main unit: 21 kg Handpiece: 1 kg



FRONT VIEW



SIDE VIEW

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CE marking preparations underway.
For exhibition and demonstration purposes only.