

# Bilicare

## Intensive Phototherapy

## INTENSIVE PHOTOTHERAPY

The efficiency of phototherapy depends on the amount of bilirubin that is irradiated. Bilicare distributes homogeneous and better light penetration around the whole-body surface than conventional phototherapy units. Bilicare provides 360° phototherapy light and evenly distributes irradiance all around baby's body to improve the treatment of neonatal unconjugated hyperbilirubinemia and reduce phototherapy time.

One of the key points in the practical execution of phototherapy is the distance between infant and light sources. Bilicare covers much more of baby's body with effective spectral irradiance than conventional phototherapy units. This significantly eliminates most of the blood transfusions for the infants.

Bilicare emits its light in the most clinical effective range of 450-470 nm. Bilicare covers the most peak absorption wavelength (458 nm) at which bilirubin is broken down and does not emit light in the ultraviolet (UV) range which is increasing the potential risk of skin damage. Bilicare does not emit light in the infrared radiation (IR) range reducing the potential risk of fluid loss. Bilicare has light intensity control from 0 to 100% as well as optional irradiance control for individual needs of patient's.

Okuman offers a comprehensive range of phototherapy products for any level of clinical application. Bilicare intensive phototherapy units have special design for optimized phototherapy applications in most NICU with different features.

### BC 050

3.5" Color Touch Screen

Adjustable Spectral Irradiance: 5° to 100%

Hi/Low Skin Temp. Alarms: 30 °C to 38.5 °C

32 pcs Super Blue Therapy LEDs

8 pcs Examination LEDs

Marker Light for Effective Surface Area

Effective Surface Area @40cm: 50x30cm

Vertical Height Adjustment

360° Rotatable and up to 40° Tilt

Real Time Clock and Date

Up- Down Counter for Treatment Time: 0 to 999 hours

Alternative Mountings for Incubator, Crib and Warmers

Skin Temperature Measurement

High/Low Skin Temperature Alarm

Silence Operation with Noise Level of ≤ 20dB(A)

Fanless SMPS& Natural Cooling Design

#### Physical Specifications

Overall Dimensions (L x W x H): 650 mm x 500 mm x 1850mm

Phototherapy Light (L x W x H): 485 mm x 230 mm x 100 mm

Weight of Phototherapy Light: 3 kg

Total Unit Weight: 19 kg

Footprint (L x W): 650 mm x 500 mm

Height: 1450 mm to 1850 mm

Electrical Input: 100-240 VAC, 50/60 Hz, 1A 25 W





## Optional Eco Version

- Economic trolley with 32 pcs. Blue treatment LEDs and 3.5 inches color TFT control
- Optional Skin temperature measurement
- Timer, adjustable special irradiance, vertical height adjustment & rotatable with tilt option

Note: Trolley design can change without further notice as per request

## Common Features of BC 250 and BC 350

Intensive phototherapy with maximum irradiation

360° uniform and simultaneous phototherapy

Custom made control panel for all kinds of clinical use

Adjustable light intensity for full term and premature babies

Up/Down treatment timer

Acrylic light shield for the protection of people around

Washable hammock

Sliding out bed that allows easy access to infant

Monitor shelf

Left and right lateral rails for protection

Height adjustment (Manual or Electrical)

Dual wheel castors with separate locking mechanism

## BC 250 INTENSIVE PHOTOTHERAPY

LED display with soft buttons

16x60 LED blue therapy lamps

4 presets for light intensity

Up/Down treatment timer

Remote control for light intensity

Lamp life timer

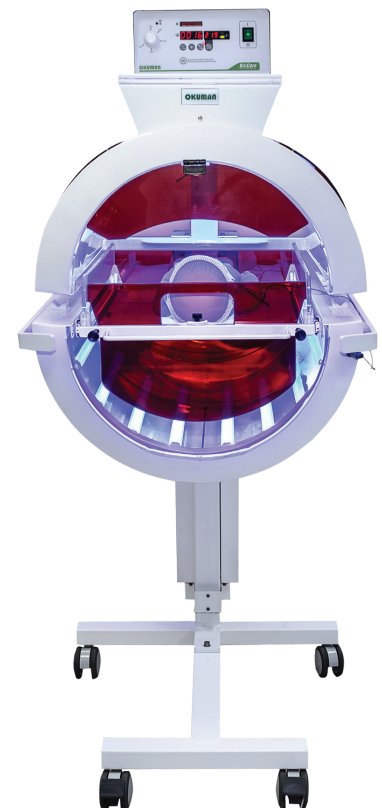
Air and skin temperature measurement

Audio and visual alarms

Hi/Low alarms for skin and air temperature

Manual height adjustment of the upper hood

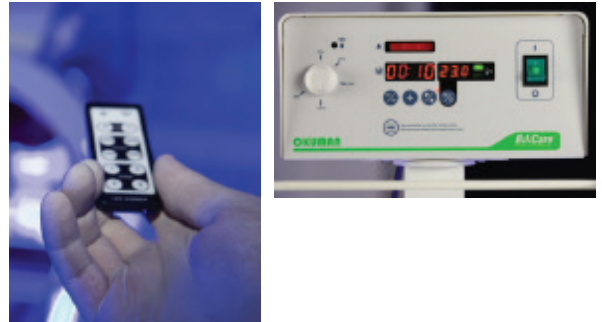
Optional fanless system for silent operation



BC 250

## Control Panel

- LED display for timer
- LED display for skin and air temperature
- Hi/Low skin and air temperature alarms
- Audio and visual alarms
- Treatment time adjustment
- Light intensity adjustment



## Remote Control

- On/Off function
- Light intensity adjustment
- 4 different presets for light intensity
- Button adjustments between 0 to 100%
- User programmable 4 light intensity memory buttons

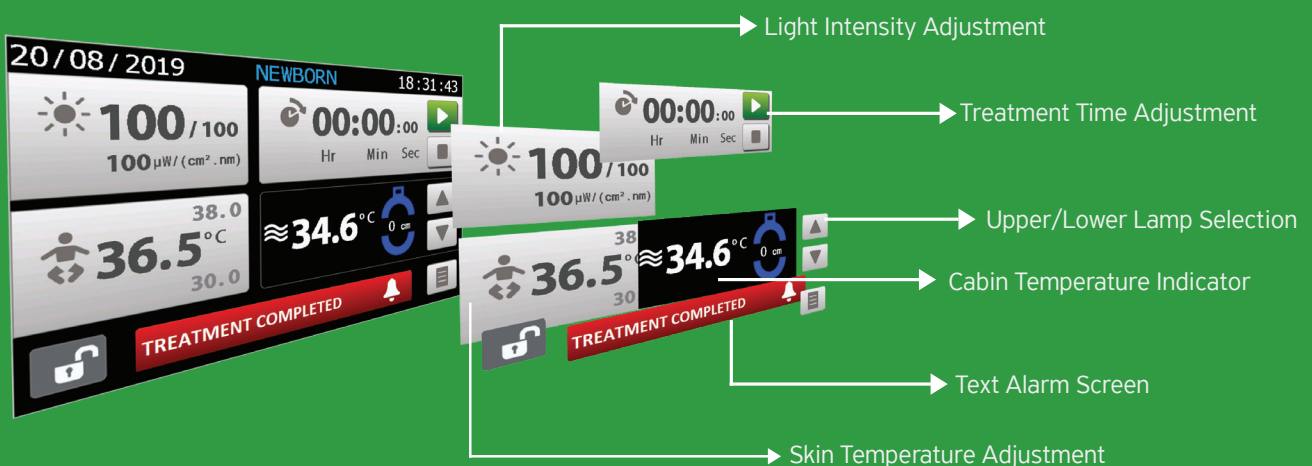
## BC 250 LCD INTENSIVE PHOTOTHERAPY

- 5" color touch screen
- Adjustable spectral irradiance in  $\mu\text{W}/\text{cm}^2/\text{nm}$
- Selectable up/down 180° or 360° phototherapy
- 16\*60 LED blue therapy lamps
- Up/Down treatment timer
- Air&skin temperature monitoring with hi/low alarms
- Patient information menu (name, ID, TSB, gender)
- Multiple language support
- Auto or manual height adjustment
- Adaptive temperature control system
- Trend information for monitored parameters
- Display lamp life timer with warning alarm
- Upper&Lower lamp selection feature



BC 250 LCD

## LCD Display (5" TFT Color Touch Screen)



## BC 350 INTENSIVE PHOTOTHERAPY

7" color touch screen

Adjustable spectral irradiance in  $\mu\text{W}/\text{cm}^2/\text{nm}$

Selectable up/down 180° or 360° phototherapy

16x60 LEDs blue therapy lamps

Up/Down counter for treatment time

Air&skin temperature monitoring with Hi/Low alarms

Patient Information menu (name, ID no, TSB, gender)

Multiple language support

Auto or manual height adjustment

Adaptive temperature control system

Trend information for monitored parameters

Display Lamp Life Timer with warning alarm

Upper & Lower lamp selection feature

SatSeconds™ available with built-in Nellcor™ SpO2 technology




Reduction of nuisance alarms

Clinician controlled features

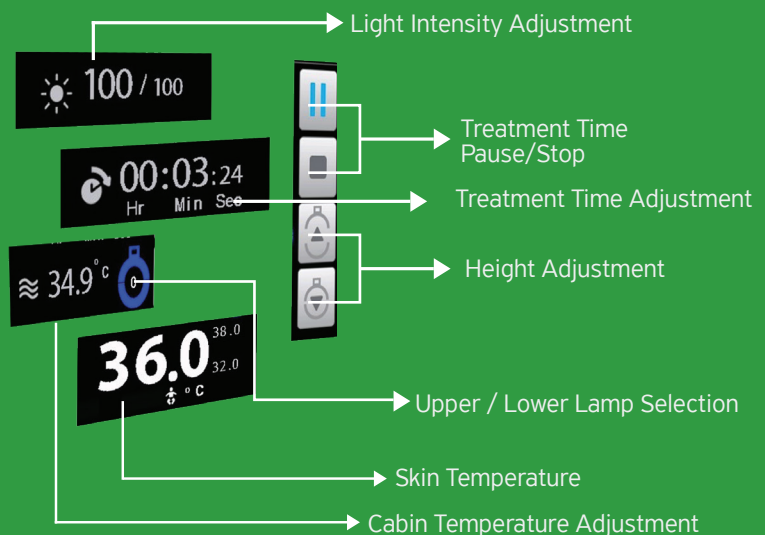
Customized alarm settings according to the needs of different patients.



BC 350

	TR 203 Transport Incubator Reusable SpO2 Probe	<b>Sensor Type:</b> Neonate <b>Number of Pin:</b> 9 Pin <b>Lenth:</b> ~100 cm
	TR 203 Transport Incubator Desposable SpO2 Probe	<b>Sensor Type:</b> Baby <b>Number of Pin:</b> 9 Pin <b>Lenth:</b> ~100 cm
	TR 203 Transport Incubator SpO2 Probe Extension Cable	<b>Lenth:</b> 300 cm

## LCD Display (7" Color Touch Screen)



## General Specifications

Technical Specifications			
Bilicare Reference No.	BC 250 LED	BC 250 LCD	BC 350
Number of Light Source	16x60 Blue LED	16x60 Blue LED	16x60 Blue LED
Screen Type	LED Display	5" Color & Touch Screen	7" Color & Touch Screen
Spectral Irradiance	0 to 100 ±5 µW/cm <sup>2</sup> /nm	0 to 100 ±5 µW/cm <sup>2</sup> /nm	0 to 100 ±5 µW/cm <sup>2</sup> /nm
Spectral Irradiance Adjustment	N/A	5 µW/cm <sup>2</sup> /nm increments	5 µW/cm <sup>2</sup> /nm increments
Light Intensity	From 0 to 100%	From 5 to 100%	From 5 to 100%
Light Intensity Adjustment	25% increments	5% increments	5% increments
Wavelength Spectrum	450 nm to 470 nm	450 nm to 470 nm	450 nm to 470 nm
Hi/Low Skin Temperature Alarm	30°C to 38,5°C	30°C to 38,5°C	30°C to 38,5°C
Hi/Low Air Temperature Alarm	30°C to 38,5°C	30°C to 38,5°C	30°C to 38,5°C
Treatment Timer, Counter Type	Yes	Yes	Yes
Phototherapy Timer	0 to 99 h	0 to 99 h	0 to 99 h
Treatment Timer, Adjustable	0 to 99 h	0 to 99 h	0 to 99 h
Infrared Remote Control	Yes	N/A	N/A
Upper Hood Height Adjustment	Manual Control	Electrical and Adaptive	Electrical and Adaptive
Upper Hood Movement	2 to 30 cm	2 to 25 cm	2 to 25 cm
Fan Speed Control	Fixed	34+°C Auto-increment	34+°C Auto-increment
Up and Down Light Selection	360°	180° and 360° Selectable	180° and 360° Selectable
Audio and Visual Alarms	Treatment Completed	Treatment Completed	Treatment Completed
	Lamp Life Timer	Lamp Life Timer	Lamp Life Timer
	Bed not seated well	Bed not seated well	Bed not seated well
	Fan	Cooling Fan Activated	Cooling Fan Activated
	High Skin Temperature	High Air Temperature	High Air Temperature
	Low Skin Temperature	Low Air Temperature	Low Air Temperature
	High Air Temperature	N/A	N/A
	Low Air Temperature	N/A	N/A
	Overheat	Overheat	Overheat
	N/A	Skin Probe Disconnected	Skin Probe Disconnected
N/A	N/A	Yes	
SpO <sub>2</sub> Measurement	N/A	N/A	Nellcor™ Oximax SpO <sub>2</sub>
360° Visual Alarm Indicator	N/A	Yes	Yes
Trend Record	N/A	Skin Temp & Air Temp	Skin Temp & SpO <sub>2</sub>
Patient Info	N/A	Name. ID. TSB. Gender	Name, ID, TSB, Gender
GUI Languages	N/A	EN, TR	EN, TR
Selectable Alarm Languages	N/A	FR, ES, RU, AR	FR, ES, RU, AR
Approx. Life-Time of the LEDs	20.000 hours	50.000 hours	50.000 hours

## Technical Specifications

### SpO<sub>2</sub> (Available only Bilicare BC 350)

Technology	Nellcor OxiMax* SpO <sub>2</sub> with SatSeconds™
Parameters Monitored	SpO <sub>2</sub> : 1% to 100%
Measurement Accuracy	70% to 100% ±2 digits; ±3 digits (in motion); 69 to 0%: unspecified
Alarm Limit Range	SpO <sub>2</sub> : 30% to 100% PR: 30 to 300 BPM
Display Resolution	1 digit 11% of SpO <sub>2</sub> )
SatSeconds Alarm Limit	10, 25, 50 or 100 SatSeconds: SatSeconds feature calculates: (SATURATION POINTS) x (SECONDS)
Alarm Messages	Sensor Disconnected, Sensor Connected, Sensor Off Patient, Low SpO <sub>2</sub> , High SpO <sub>2</sub> , Low Pulse Rate, High Pulse Rate, Pulse Timeout, Pulse Not Available

### Physical Specifications (Approximately)

Bilicare Reference No.	BC 250	BC 250 LCD	BC 350
Width and Depth (W & D)	640mm x 920 mm	640mm x 820 mm	640mm x 820 mm
Height (H), Minimum-Maximum	1520 mm to 1770 mm	1370 mm to 1625 mm	1370 mm to 1625 mm
Hammock to Lamp Shield	260 mm	260 mm	260 mm
Hammock Surface Area	570 mm x 370 mm	570 mm x 370 mm	570 mm x 370 mm
Weight of Total Unit	76 Kg	77 Kg	77 Kg
Certificates	ISO 9001:2015 EN ISO 13485:2016 CE Marking	ISO 9001:2015 EN ISO 13485:2016 CE Marking	ISO 9001:2015 EN ISO 13485:2016 CE Marking
Classification In accordance with EU Directive 93/42/EEC	IIb	IIb	IIb
GMDN Code	35239	35239	35239

Standard Compliance	TS EN 60601-1 TS EN 60601-1-2 TS EN 60601-1-6 TSE N 60601-1-8 TS EN IEC 60601-2-50 TS EN 62366-1 TS EN ISO 80601-2-56 TS EN ISO 14971		
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Operating Conditions		Storage/Transportation Conditions	
Ambient Temperature	18° C to 38° C	Ambient Temperature	-25° C to 60° C
Humidity	10% to 95% RH non-condensing	Humidity	0% to 95% RH non-condensing
Ambient Pressure	1100 hPa to 700 hPa	Ambient Pressure	1100 hPa to 500 hPa
Electrical Input	100-240 VAC, 50/60 Hz, 0.2 to 1 Amp.	100-240 VAC, 50/60 Hz, 0.2 to 1 Amp.	100-240 VAC, 50/60 Hz, 0.2 to 1 Amp.
Earth Leakage Current	<300 µA	<300 µA	<300 µA

## OKM 200 Transcutaneous Bilirubinometer

Display Range	No less than 25.0 mg/dL (425 $\mu\text{mol/L}$ )
Accuracy	$\pm 1.5$ mg/dL ( $\pm 25.5$ $\mu\text{mol/L}$ )
Repeatability	No more than 3%
Information Prompt	Low voltage prompt
Inspection Screen	Displayed when white screen is detected: 0.0-1.5 Displayed when yellow screen is detected: 20.0 $\pm$ 1.5

### Other Parameters

Rated voltage and frequency of the device when it is supplied by the supply main: 220V-230V/ 50Hz  
Input power of the device when it is supplied by the supply main: 30 VA  
Power supply type of the host when it is supplied by the internal power: Rated voltage 7.4V  $\text{===}$




Base output..... 8.4V  $\text{===}$ 1A

Light Source..... Xenon flash lamp

## STANDARD ACCESSORIES

- 1 pc. Skin Temperature Probe
- 1 pc. Eye protection mask bonnet type
- 1 pc. Power Cord
- 1 pc. User Manual
- 1 pc. Hammock, only for BC 250, BC 250 LCD, BC 350
- 1 pc. Nellcor SpO<sub>2</sub> Extension Cable for BC 350
- 2 pcs. Nellcor SpO<sub>2</sub> Probe, Neonatal, Single Patient Use for BC 350



	Disposable Skin Temperature Probe	2 pin, 120 cm, 20 k $\Omega$
	Skin Temperature Probe Stamp	-
	Reusable Skin Temperature Probe	1,6 metre, 4 pin, internal resistance: 30 k $\Omega$



Optional Phototherapy Accessories		
Product Image	Product Name	Technical Specifications
	Newborn Bone Type Phototherapy Eye Mask Small	Head circumference: 20-28 cm
	Newborn Bone Type Phototherapy Eye Mask Medium	Head circumference: 24-33 cm
	Newborn Bone Type Phototherapy Eye Mask Large	Head circumference: 30-38 cm
	Phototherapy Protected Diaper - Small	For babies weighing 750g-1250g
	Phototherapy Protected Diaper - Medium	For babies weighing 1250g - 2250g
	Phototherapy Eye Mask Y Type Small	-
	Phototherapy Eye Mask Y Type Medium	-
	Phototherapy Eye Mask Y Type Large	-

Fototerapi Aksesuarları		
Ürün Görseli	Ürün Adı	Teknik Özellikler
	Phototherapy Eye Mask Bonnet Type Small	-
	Phototherapy Eye Mask Bonnet Type Medium	-
	Phototherapy Eye Mask Bonnet Type Large	-
	Baby Gloves	-
	Hammock for BC100/250/350	Size: 63 cm x 46 cm
	Hammock for BC100/250/350 without Logo	Size: 63 cm x 46 cm
	Dust Cover	



# OKUMAN

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