Scoro S | **Scoro E**

The Incredibles

www.broncolor.com

broncolor®
THE LIGHT

Creativity meets **high-performance**

In the digital age, creativity is the critical factor determining any photographer's success. With the new Scoro power packs, you can let your artistic imagination run free. Their uniquely convenient control systems, help you deal with even the most complex lighting setups easily every time. No other flash system gives you so much creative capability. And no other holds so many world records.

More than 50 years of knowledge and experience, the use of high-performance components, and the latest production technologies have helped us to further develop the most innovative tool in flash photography – the Scoro – without making even the slightest compromise in quality.

Ultimate light quality

Light quality depends both on the quality of the light shaper used and on the light control precision of the power pack.

These two Scoro units control the flash voltage to better than +/- 0,5% accuracy. And the flash duration is monitored with micro-second precision. A repeatability never before achieved. With the Scoro family you have a choice of 11 f-stops to set the flash output you need. That is an adjustment range from 3 to 3200 J.

Safe and sure

Scoro power packs also make no compromises when it comes to functionality and reliable operation. The highest quality standards are applied to every component, guaranteeing that the selected output and flash time is exactly right for each flash.

Tim Flach, UK

Innovative technologies – **made in Switzerland**

Innovation as motivation. Although the technologies we have developed are accepted as ground-breaking, they are continuously perfected and further developed. The basis for this is a constant desire to optimise and the continuing study of electrical technologies, new materials and alternative manufacturing processes. Photography is born of light, and it is our mission to accompany its development and further the advance of technical progress in professional lighting technology.

Cut-off technology
Flash duration and light output are the two decisive factors in light control. A microprocessor in the Scoro will calculate the shortest or longest flash duration for a given output for you. This enables rapid flash sequences with up to 50 flashes per second.

Constant colour temperature – ECTC
Scoro is the only studio flash system which can maintain colour temperature over the entire power range at all three outputs, or, when you need to, change it in calibrated steps of +/- 200 K at constant power (only Scoro S). The second generation of our patented ECTC (Enhanced Colour Temperature Control) technology, which adapts flash voltage and flash duration to each other, achieves a constant colour temperature over the entire variation range at all lamp.

Individual power distribution
The Scoro S has three lamp outlets, the Scoro E two. Each has an individual power controller with LED display, and can adjusted independently of the other outlets. The unit therefore behaves like three (or two) independent power packs. With the Scoro family you have a choice of 11 f-stops to set the flash output you need. That is a control range from 3 to 3200 J.

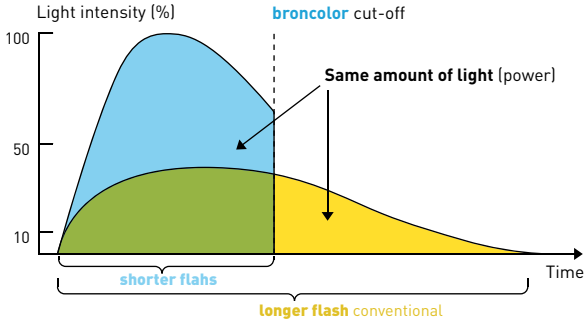
Speed mode
In Speed mode the charging time and flash duration are reduced by up to 50%. In this way you can achieve up to ten shots per second at full output, or up to 50 at reduced power. This makes the Scoro S a top-class flash unit for fashion shoots, and, with its fan cooling, even long flash series are no problem. In Speed mode the maximum flash energy is reduced by 25%.

Speed meets precision – unbeatable flash times

FLASH CUT-OFF

Cut-off technology

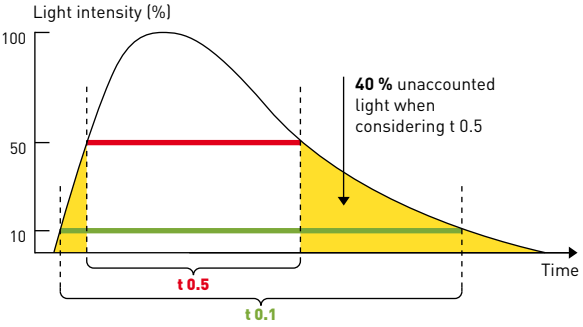
For a consistent flash energy, flash durations can be substantially shorter using broncolor cut-off technology than is possible with conventional units:



t 0.1 = 1/600 s

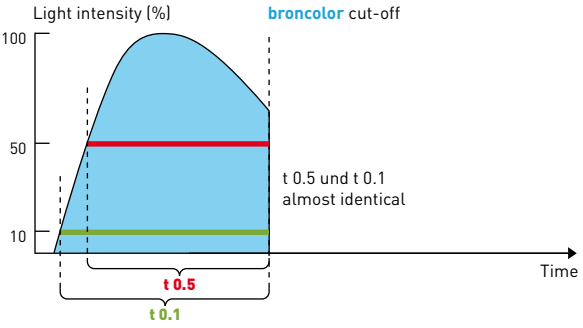
Why t 0.1 and not t 0.5?

Comparison without broncolor cut-off technology



t 0.5 does not measure all the light relevant for the complete shooting: light is radiated before and after t 0.5, which can result in blurring

Comparison with broncolor cut-off technology



The total quantity of light is taken into account. No blurring, because the flash is cut off.

t 0.5 = 1/600 s

Good to know

There is no generally valid factor for converting t 0.5 to t 0.1. It depends on the technology employed. It is therefore not correct to use t 0.5 to compare different flash durations; for comparisons t 0.1 must be known as well.

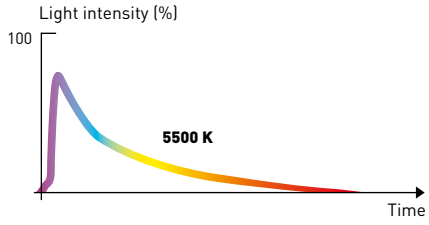
Absolute colour constancy
with ECTC*

CONSTANT COLOUR
ECTC

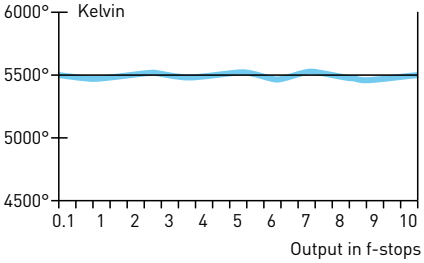
Constant colour temperature
ECTC technology enables a constant average colour temperature over the entire output range.

The colour temperature tolerance band is only +/- 50 Kelvin.

Thereby the amplitude of the blue light component is controlled according to the warmer red component, which originates at cut-off.



With this unique technology broncolor provides output control over 10 f-stops at constant colour temperature. There is no other technology which compares with this performance. With other technologies such a constant colour temperature can only be attained over 4 f-stops.



Even for fast flash sequences, constant colour temperature and quantity of light are the primary quality criteria for broncolor products.

with broncolor technology

without broncolor technology

***ECTC** Enhanced Colour Temperature Control

Control meets efficiency – enormous control range, individually controllable

CONTROL RANGE

Power distribution

Scoro units have either two or three lamp connections. Each has an individual power controller with LED display, and can be adjusted independently of the other connections. The unit therefore behaves like three (or two) independent power packs.

The individual power distribution combined with the large control range, at its maximum from 3 – 3200 joules, allows the photographer an almost free choice of f-stop.

The required flash output can then be chosen from up to 11 f-stops or 10 f-stop intervals.

A further power display provides information about the total energy supplied by the power pack. With the buttons beside the display it is possible to change the total energy so as to correct all channels simultaneously.

Aperture closed

Aperture open

Record charging times
with Speed mode

SPEED MODE

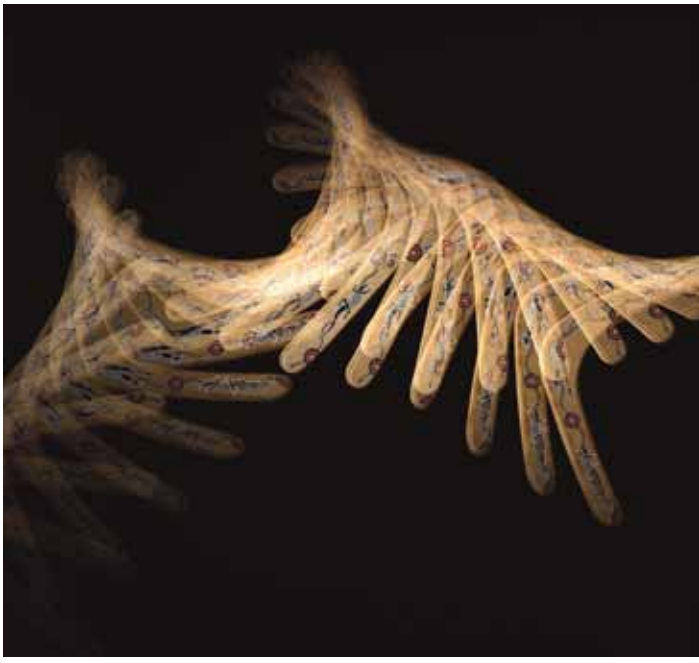
Speed mode
In Speed mode the Scoro can be operated with a minimum charging time of 0.4s (1600 J), but still with optimum colour temperature and maximum output. The shortest charging time is just 0,02 s.

How is that possible?
With the Speed button the maximum energy is reduced by 25% and the charging time shortened by up to 50%.

In this way Scoro achieves the shortest charging time worldwide, just 0,02 s.

Using this technology stroboscope shootings can be illuminated with only a single flash unit. For example, in technical and scientific photography motion sequences can be made visible.

By alternately triggering several power packs, the number of flashes per second can even be doubled.



with broncolor technology

without broncolor technology

Ashish Chawla, India

Innovation **pays off**

Reliable and user-friendly

Although it has so many versatile functions, the Scoro user interface is simple and self-explanatory. Using the graphic LCD display you can program modelling-light proportionality, flash duration, flash delay*, memory*, and the fine adjustment of colour temperature*. The blue, illuminated silicone keypad and the digital display can even be read in the dark. The wear-free button fields instead of rotary switches and buttons increase functional reliability over long years of use. Help texts explain the functions for you directly on the unit - and that in ten languages.

Trouble-free compatibility

Scoro integrates seamlessly into the existing broncolor studio range. This comprises comprehensive light accessories for photo studios, ranging from the various lamp heads and light shapers, through filters, honeycomb attachments and stands, to remote control units and radio triggering systems. Scoro is compatible with all these components. For an overview, please see the broncolor System Catalogue or www.broncolor.com

Radio remote control

All Scoro functions can be controlled from your digital workplace using the radio remote control within a range of 300 m. In addition Scoro S power packs have an infrared receiver, and can be controlled and triggered with a wireless remote control. The remote-control unit enables ceiling mounting of a Scoro power pack, thus optimising the useful working surface in your studio.

A long-term investment

Scoro stands not just for stable value, it also ensures the future of your investment. The use of high-performance transistors and the latest microprocessor technology has allowed broncolor to develop equipment with impressive performance credentials. Like all broncolor products, Scoro power packs are built to rigorous quality standards. This becomes especially evident in long and hard continuous service in major productions with fast flash sequences. Every power pack produces thousands of flashes a day with no adverse effect on the capacitors.

For Mac and PC

With Scoro S you have the convenience of being able to make lighting corrections directly on your computer screen. The user-friendly program allows you to control all functions of the power packs through the wireless interface from your Mac or PC. There are four memory locations for saving lighting set-ups. In this way you can offer your customers a choice of several lighting set-ups. In addition each lamp can be identified and given its own address to provide an extra level of control.

*Only Scoro S

Krentz Photography, Germany

Scoro S – the unbeatable

FLASH CUT-OFF
t 0.1 = 1/10‘000 s
t 0.5 = 1/14‘000 s

CONSTANT COLOUR ECTC
5500 K

CONTROL RANGE
10 F-STOPS

SPEED MODE
0.02 s

Scoro S is the first choice for exceptional pictures. With Scoro S, broncolor sets no less than four world records, and remains the major influence in modern flash technology. Thanks to the numerous power distribution options at constant light quality, many of them unique, this power pack is the ideal light source in professional photography. Charging times as short as 0,02 s, a 10-f-stop control range at constant colour temperature, colour temperature adjustable in 200 K intervals, and three independent channels with precisely the same colour temperature are just a few of its functions for outstanding pictures.

Major performance features

- Ultra-fast flash times down to **1/10’000 s** (t 0.1) or **1/14’000 s** (t 0.5) through innovative cut-off technology
- Extremely powerful lighting – outputs up to **3200 J**
- **Three lamp connections**, individually switchable and each **independently controllable**
- ECTC (Enhanced Color Temperature Control) technology for constant colour temperature, where necessary with selective colour temperature adjustment
- Long-life halogen modelling light, up to **3 × 650 W** and five proportionality levels
- Robust, easily readable 8 cm (3,2") LCD display (240 × 180)
- Elegant, robust metal housing with carbon-look and massive carrying handle
- Speed mode
- Memory function
- Further special functions, such as alternation, delay and stroboscopic effects

Scoro E – the smart one

FLASH CUT-OFF
t 0.1 = 1/8‘000 s
t 0.5 = 1/12‘000 s

CONSTANT COLOUR ECTC
5500 K

CONTROL RANGE
8 F-STOPS

Scoro E fascinates just by its appearance. In secretive black, it does not immediately display all its strengths, but rather keeps key features under cover. Simplification by reduction is the watchword. With intuitive menu navigation, the innovative ECTC system, two lamp connections, and excellent output, the Scoro E is armed for the best results in fashion and still-life photography. In spite of its rejection of complexity, the Scoro E convinces with the innovative ECTC system, two lamp connections and excellent performance. The E variant of the Scoro is equipped for optimum results in fashion and still-life photography.

Major performance features

- Ultra-fast flash times down to **1/8’000 s** (t 0.1) or **1/12’000 s** (t 0.5) through innovative cut-off technology
- Extremely powerful lighting - outputs up to **3200 J**
- **Two lamp connections**, individually switchable and with **fully independent control**
- ECTC (Enhanced Color Temperature Control) technology – constant colour temperature for each trigger
- Long-life halogen modelling light, up to **2 × 650 W** and five proportionality levels
- Robust, easily readable 8 cm (3,2˝) LCD display (240 × 180)
- Elegant, robust metal housing with carbon-look and massive carrying handle

Scoro S and Scoro E –
The critical differences at a glance

	Scoro S	**Scoro E**
Lamp outlets	3	2
Flash duration t 0.1 (t 0.5)	1/10'000 s (1/14'000 s)	1/8'000 s (1/12'000 s)
Fastest charging time	0,02 s	0,06 s
Selectable flash duration	Yes	Yes
Sequence function	Yes	Yes
Interval	Yes	–
Individual colour correction	Yes	–
Speed mode	Yes	–
Memory function	Yes	–
Delay	Yes	–
Alternate	Yes	–

www.youtube.com/broncolorworld

Robert Snow Photography, USA

Scoro S 1600
Scoro S 3200

Scoro S 1600 RFS | 31.041.XX
Scoro S 1600 RFS 2 | 31.044.XX

Scoro S 3200 RFS | 31.043.XX
Scoro S 3200 RFS 2 | 31.045.XX

	Normal mode	**Normal mode**
Flash energy	1600 J	3200 J
f-stop at 2 m, 100 ISO, reflector P70	64 $^{2}/_{10}$	90 $^{2}/_{10}$
Flash duration at max. energy* t 0.1 (t 0.5)	1/265 s (1/760 s)	1/132 s (1/390 s)
Variation range for flash duration* t 0.1 (t 0.5)	1/150 – 1/10'000 s (1/450 – 1/14'000 s)	1/85 – 1/10'000 s (1/240 - 1/14'000 s)
Charging time (min. – max. energy) at 230 V	0,02 – 0,6 s	0,02 – 1,3 s
120 V	0,02 – 1,0 s	0,02 – 2,0 s
100 V	0,02 – 1,1 s	0,02 – 2,2 s
	Switchable to slow charge	Switchable to slow charge

	Speed Mode	**Speed Mode**
Flash energy	1200 J	2400 J
f-stop at 2 m, 100 ISO, reflector P70	45 $^{9}/_{10}$	64 $^{9}/_{10}$
Flash duration at max. energy* t 0.1 (t 0.5)	1/535 s (1/1'600 s)	1/285 s (1/860 s)
Variation range for flash duration* t 0.1 (t 0.5)	1/150 – 1/10'000 s (1/450 - 1/14'000 s)	1/85 – 1/10'000 s (1/240 - 1/14'000 s)
Charging time (min. – max. energy) at 230 V	0,02 – 0,4 s	0,02 – 0,8 s
120 V	0,02 – 0,6 s	0,02 – 1,2 s
100 V	0,02 – 0,7 s	0,02 – 1,4 s

Ready display	Visual and audible (can be switched off), activated when 100 % of the selected energy is reached	
Lamp outlets	3 outlets with flash cut-off and ECTC	
Power distribution	Symmetrical and individually asymmetrical	
Control elements	Dust and scratch-resistant, illuminated silicone keypad, setting by radio remote control	
Control range for flash energy	Over 9 f-stops	Over 10 f-stops
	in $^{1}/_{10}$ or full f-stop intervals. Choice of joules or percent for LCD display	
Colour temperature	ECTC technology (Enhanced Colour Temperature Control) for constant or specifically adjustable colour temperature	
Modelling light	Halogen max. 3 × 650 W at 200 – 240 V / Halogen max. 3 × 300 W at 100 – 120 V Proportional to flash energy, also full and low settings. Proportionality can be adapted to other broncolor power packs and to monolights	
Additional functions	t 0.1, sequence, delay, interval, colour temperature, alternating, stroboscopic, memory, and many more	
Flash release	Manual release button, photocell, infrared RFS or RFS 2 receiver, may be switched off sync cable, IRX 2	
Number of sync sockets	1	1
Computer connection for remote control	1	1
Stabilised flash voltage	+/- 0,3%	+/- 0,3%
Power requirements	16.0 A (230 V) 15.0 A (120 V) 15.0 A (100 V)	16.0 A (230 V) 15.0 A (120 V) 15.0 A (100 V)
Dimensions without handle	28,8 × 19 × 29,5 cm (11,3 × 7,5 × 11,6")	28,8 × 19 × 40 cm (11,3 × 7,5 × 15,7")
Weight	8,9 kg (19,6 lbs)	12,1 kg (26,7 lbs)

*Automatic regulation of flash duration and energy for optimum colour temperature. Preselection of minimum flash duration possible

Scoro E 1600
Scoro E 3200

Scoro E 1600 RFS | 31.060.XX
Scoro E 1600 RFS 2 | 31.062.XX
Scoro E 3200 RFS | 31.061.XX
Scoro E 3200 RFS 2 | 31.063.XX

Flash energy	1600 J	3200 J
f-stop at 2 m, 100 ISO, reflector P70	64 $^{2}/_{10}$	90 $^{2}/_{10}$
Flash duration at max. energy* t 0.1 (t 0.5)	1/265 s (1/760 s)	1/132 s (1/390 s)
Variation range for flash duration* t 0.1 (t 0.5)	1/265 – 1/8'000 s (1/760 – 1/12'000 s)	1/132 – 1/8'000 s (1/390 – 1/12'000 s)
Charging time (min. – max. energy) at 230 V	0,06 – 1,0 s	0,06 – 1,7 s
120 V	0,06 – 1,4 s	0,06 – 2,4 s
100 V	0,06 – 1,5 s	0,06 – 2,6 s
	Switchable to slow charge	Switchable to slow charge

Ready display	Visual and audible (can be switched off), activated when 100 % of the selected energy is reached	
Lamp outlets	2 outlets with flash cut-off and ECTC	
Power distribution	Symmetrical and individually asymmetrical	
Control elements	Dust and scratch-resistant, illuminated silicone keypad, setting by radio remote control	
Control range for flash energy	Over 7 f-stops	Over 8 f-stops
	in $^{1}/_{10}$ or full f-stop intervals. Choice of joules or percent for LCD display	
Colour temperature	ECTC (Enhanced Color Temperature Control) technology for constant colour temperature	
Modelling light	Halogen max. 2 × 650 W at 200 – 240 V / Halogen max. 2 × 300 W at 100 – 120 V Proportional to flash energy, also full and low settings Proportionality can be adapted to other broncolor power packs and to monolights	
Additional functions	t 0.1, sequence	
Flash release	Manual release button, photocell, RFS or RFS 2 receiver, may be switched off, sync cable	
Number of sync sockets	1	1
Computer connection for remote control	1	1
Stabilised flash voltage	+/- 0,5%	+/- 0,5%
Power requirements	16.0 A (230 V) 15.0 A (120 V) 15.0 A (100 V)	16.0 A (230 V) 15.0 A (120 V) 15.0 A (100 V)
Dimensions without handle	28,8 × 19 × 29,5 cm (11,3 × 7,5 × 11,6")	28,8 × 19 × 40 cm (11,3 × 7,5 × 15,7")
Weight	8,7 kg (19,2 lbs)	12 kg (26,5 lbs)

*Automatic regulation of flash duration and energy for optimum colour temperature. Preselection of minimum flash duration possible

broncolor®

The broncolor System

POWER PACKS

Senso A2
31.050.XX
Senso A4
31.051.XX

Scoro S 1600 RFS
31.041.XX
Scoro S 3200 RFS
31.043.XX
Scoro S 1600 RFS 2
31.044.XX
Scoro S 3200 RFS 2
31.045.XX

Scoro E 1600 RFS
31.060.XX
Scoro E 3200 RFS
31.061.XX
Scoro E 1600 RFS 2
31.062.XX
Scoro E 3200 RFS
31.063.XX

Verso A2 RFS
31.031.XX
Verso A4 RFS
31.033.XX

Power Dock for
Verso A2 / A4 RFS
36.124.00

Mobil A2L Lithium
31.013.XX
Mobil A2L Lead
31.012.XX

HMI BALLAST UNITS

HMI 200
41.103.XX
HMI 400.575.800
41.102.XX

LAMPS

Pulso G
32.115.XX 1600 J
Pulso G
32.116.XX 3200 J

Unilite
32.113.XX 1600 J
Unilite
32.114.XX 3200 J

Pulso Twin
32.117.XX

Pulso 8
32.118.XX

Picolite
small lamp
32.021.XX
Mobilite 2
small lamp
32.012.00

Litos
32.030.XX
MobiLED
32.013.00

Only MobiLED and Litos reflectors are included

MONOLIGHTS

Minicom 160 / RFS
31.474.XX / 31.473.XX

Minicom 40 / RFS
31.405.XX / 31.406.XX

Minicom 80 / RFS
31.415.XX / 31.416.XX

Reflectors are not included

REFLECTORS AND ATTACHMENTS

Standard reflector P65
33.106.00
Standard reflector P70
33.107.00

Narrow angle reflector P45
33.104.00
Narrow angle reflector P50
33.105.00

P-Travel reflector
33.103.00

Softlight reflector P
33.110.00

PAR reflector
33.113.00

Beauty Dish
with textile diffuser
33.111.00

UV attachment
33.626.00

Wide angle
reflector P120
33.112.00

Power reflector
for Ringflash C
33.125.00

Background
reflector
33.114.00

Beauty reflector
for Ringflash C
33.124.00

Spot attachment
33.640.00

Soft reflector
for Ringflash C
33.123.00

Conical snoot
33.120.00

SPECIAL REFLECTORS

Mini-Satellite
33.152.00
Satellite Staro
33.151.00

Para 88 reflector
33.482.00
Para 88 P kit
33.483.00

Para 170 FB
33.484.00

Para 220 FB
33.485.00

Para Soft
220 FB
33.487.00

Para 330 FB
33.486.00

Stands and lamps are not included

SPECIAL ACCESSORIES

Transmitter RFS
36.130.00

RFS 2 Transmitter kit
36.133.00

Transceiver RFS
36.131.00

RFS 2 Receiver kit
36.134.00

Infrared
transmitter IRX 2
36.116.00

RFS 2 Transmitter/
Receiver kit
36.135.00

Complete product overview on www.broncolor.com

HMI CONTINUOUS LIGHT

F200 lamp
42.105.00

F400 lamp
42.106.00

F575.800 lamp
42.104.00

HMI REFLECTORS

Open Face
reflector
for HMI F200
43.104.00

Open Face
reflector
for HMI F400
43.105.00

PAR reflector
for HMI F575.800
43.103.55 (5500 K)
43.103.59 (5900 K)

HMI LIGHT SHAPER

Litepipe
for HMI F400
43.118.00

EFFECT LAMPS

Ringflash C
32.462.XX

Ringflash P
32.461.XX

Hazylight-Soft
33.513.00

Balloon
33.161.00

Picobox
33.128.00
Boxlite 40
32.341.XX

Lightbar 120 Evolution
32.353.XX
Lightbar 60 Evolution
32.351.XX

Striplite 120 Evolution
32.303.XX
Striplite 60 Evolution
32.301.XX

Litestick
32.451.00

Pulso-Spot 4
32.425.XX
broncolor Flooter
32.431.00

Optical snoot 150 mm
for Pulso-Spot 4
5500 K: 33.620.55
5900 K: 33.620.59

Pulso adapter
for Mobilite 2 / Picolite
33.501.00

Projection attachment
for Picolite
33.641.00

Barn door with 4 wings
33.246.00 for P65, P45 and PAR
33.247.00 for P70

Barn door with 4 wings
for Mobilite 2 / Picolite
33.244.00

Honeycomb grids, set of 3 pcs.
33.219.00 for Ringflash C
33.189.00 for Power reflector

Attachment with 3 honeycomb grids and
2 aperture masks for Mobilite 2 / Picolite
33.204.00

Fresnel spot attachment
for Mobilite 2 / Picolite
33.631.00

Barn door with
2 wings for P 70
33.227.00

Sunlite-Set
33.162.00

Honeycomb grids set of 3 pcs.
33.205.00 for P50
33.206.00 for P65, P45 and PAR
33.211.00 extra narrow for P65, P45 and PAR
33.207.00 for P70

SOFTBOXES

Adapter ring and stands are not included

Pulsoflex C
35 × 120 cm
(14 × 48")
33.444.00

Pulsoflex C
60 × 100 cm
(24 × 40")
33.443.00

Pulsoflex C
70 × 70 cm
(28 × 28")
33.441.00

Flex with ring
70 × 70 cm
(28 × 28")
33.448.00

Pulsoflex C
80 × 140 cm
(32 × 56")
33.446.00

Pulsoflex C
100 × 100 cm
(40 × 40")
33.442.00

Pulsoflex C
150 × 150 cm
(60 × 60")
33.445.00

Pulsoflex EM
30 × 110 cm
(12 × 44")
33.424.00

Pulsoflex EM
35 × 60 cm
(14 × 24")
33.415.00

PulsoflexEM
40 × 155 cm
(16 × 62")
33.425.00

Pulsoflex EM
50 × 50 cm
(20 × 20")
33.406.00

Pulsoflex EM
55 × 95 cm
(22 × 38")
33.416.00

Pulsoflex EM
80 × 140 cm
(32 × 56")
33.417.00

Pulsoflex EM
80 × 80 cm
(32 × 32")
33.407.00

Pulsoflex EM
110 × 110 cm
(44 × 44")
33.408.00

UMBRELLAS

33.459.00 Silver ø 82 cm (32.3")
33.452.00 Silver ø 102 cm (40.2")
33.454.00 Transparent ø 102 cm (40.2")
33.460.00 White ø 82 cm (32.3")
33.453.00 White ø 102 cm (40.2")
33.496.00 Umbrella reflector

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broncolor®
THE LIGHT

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