

Safeline 科好颜色解决方案

Color Assessment Cabinet

标准光源箱 (对色灯箱)

Operator's Manual

使用说明书

Please read this manual before operating this equipment.

After you finish reading this manual, store it in a safe place for future reference.

请在使用本机前阅读此说明书, 并将其保存好以备将来参考。

Instructions for Lamp Cabinet

- Provide several light sources, i.e. D65, TL84, CWF, UV, F/A.
- Apply microcomputer to switch between the light sources quickly.
- Super timing function to record use time of each light source separately.
- All fittings are imported, ensuring quality.

I. Descriptions

Color Assessment Cabinet, suitable for all industries and applications where there is a need to maintain color consistency and quality-e.g. Automotive, Ceramics, Cosmetics, Foodstuffs, Footwear, Furniture, Knitwear, Leather, Ophthalmic, Dyeing, Packaging, Printing, Inks and Textile.

Since different light source has different radiant energy, when they arrive on the surface of an article, different colors display. With regard to color management in industrial production, when a checker has compared the color consistency between products and examples, but there may exist difference between light source used here and light source applied by the client. In such condition, color under different light source differs. It always brings following issues: Client makes complaint for color difference even requires for rejection of goods, seriously damaging company credit.

To resolve the above problem, the most effective way is to check good color under same light source. For example, international practice applies Artificial Daylight D65 as standard light source for checking goods color.

It's very important to use standard light source to check color difference in night duty.

Besides D65 light source, TL84, CWF, UV, and F/A light sources are available in this Lamp Cabinet for metamerism effect.

II. Lamp Cabinet Performance

1. Hepachromic artificial daylight acknowledged by CIE, 6500K color temperature.
2. Lighting scope: 750-3200 Luxes.
3. Background color of light source is Neutral Grey of absorbance. In using lamp cabinet, prevent outer light from projecting on article to be checked. Don't place any unconcerned articles in the cabinet.
4. Making metamerism test. Through microcomputer, the cabinet can switch between different light sources in very short time to check color difference of goods under different light source. When lighting up, prevent lamp from flashing as home fluorescent lamp is lighted.
5. Correctly record use time of each lamp group. Especially D65 standard lamp shall be replaced after being used for over 2,000 hrs, avoiding error resulted from aged lamp.
6. UV light source for checking articles containing fluorescent or whitening dye, or be used to add UV to D65 light source.
7. Shop light source. Oversea clients often require other light source for color check. For example, USA clients like CWF and European and Japan clients for TL84. It's because that goods is sold indoor and is under shop light source but not outer sun light. It's become more and more popular to use shop light source for checking color.

III. Operation Instructions

1. Plug one end of power line into socket at the backside of the lamp cabinet and

the other end into electric supply source (electric supply must comply with nominal electricity of the cabinet.) At this time, the display will give information indicating that power is on.

2. Press "ON/OFF" key for one time and the Timing will display the total service time of this lamp cabinet.
3. Press D65 key again and D65 lamp lit up. The Timing will display the total service time of D65 lamp. In case of pressing F, TL84, or UV key, the corresponding lamp group lit up. And the Timing will display the total service time of this lamp group. In case of using two or more light sources, it's just to press two key or more keys.
4. Put articles to be checked at the center of the bottom of the lamp cabinet. When comparing the color of two or more articles, don't observe them by overlapping, but to put them in the cabinet parallel.
5. It's appropriate to observe target in reference to Figure I. When light is projecting on article in right angle, checker shall observe the article in 45 angle.
6. After working, press ON/OFF key to power-off. Power-off lamp cabinet in case of long-time not use.
7. Install new lamp in reference to Figure II or instructions noted on the bottom of lamp. Don't make mistake in positioning lamp. After replacing, zero the use time of new lamp (calculate time from zero) as follows: light up new lamp, extend small screw driver to the central hole of CLR and press the key (the timing of lamps not lit up are not zeroed). Note: Don't press CLR key in case of not replacing lamp, avoiding error zeroing.

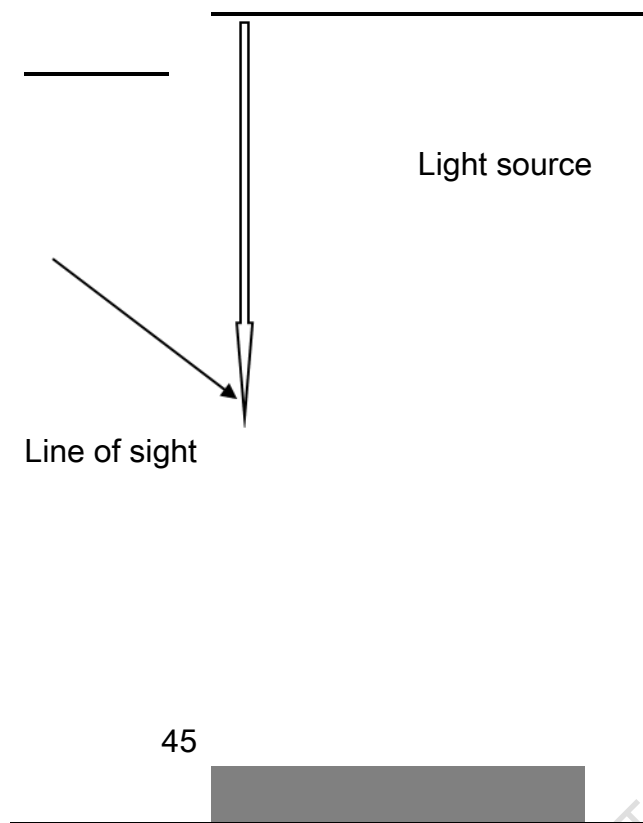


Figure I

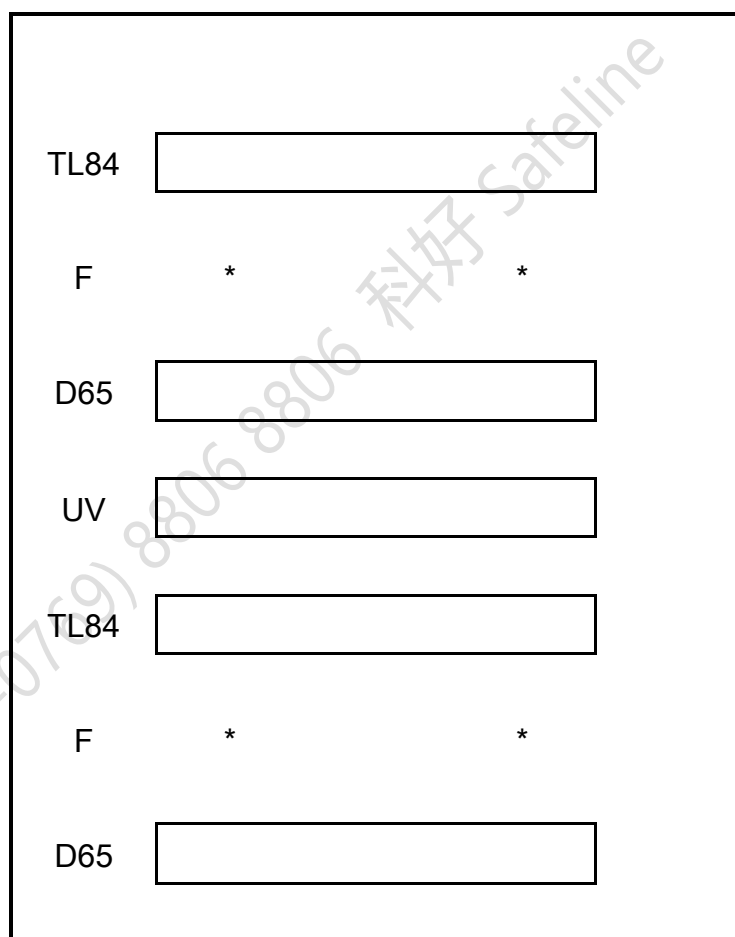


Figure II

IV. Electrical Parameters

Power supply: AC 220V, 50Hz

Power: less than 300W

V. Lamp Cabinet Maintenance

1. Warranty period of lamp cabinet is one year (person's careless damage or lamp aging is not in this scope).

2. Replace it in case the internal wall of lamp cabinet is dirties. Replace it in case lamp works over-normal time or its ends are blackened. We can provide various standard fittings all the time (note: Fitting shall comply with relevant standard).

Needing Attention

1. How can I elongate the use life of lamp?

The use life of lamp is decided by actual use time and use time. For example, in case user need to use lamp for long time and power on and off lamp and switch functions in a day for many times, the use life of lamp is reduced. When you want power on and off lamp cabinet for several times in an hour, don't power off the lamp cabinet. Generally, powering on lamp is equal to using lamp for one hour. Please power off lamp cabinet in case of not using lamp for long time. In case of unnecessary condition, don't try to switch from different light sources, elongating effective use life of lamp.

2. How can I install CWF light source or other light sources?

T60 Color Assessment Cabinet is equipped with five different standard light sources, of which 4 are installed on the fixed position in lamp cabinet. Also, the cabinet has 2 CWF lamp that client can install them when they are needed. At that moment, press TL84 key to light up CWF light source. If use CWF light source for long time, write CWF word to paster and past it to the TL84 key. Install other lamps according to the above procedures.

3. How can I buy a new lamp for replacing or needing other special light sources?

Lamp tube and bulb used in standard light source cabinet is certified special

light source for laboratory, different from common civil light source. Buy new fittings in certified dealer for replacing. We can provide various original fitting and other special light sources, including D65, TL84, CWF, UV, F light sources, and imported fittings for D75, D50, D35, TL83, U30, INCA, HORIZON international standard light sources.

4. How to clean dirtied wall of lamp cabinet?

If the internal wall of lamp cabinet is dirtied with dust or hangprint, use clean, white, soft and moistened cloth to wipe the dirty off. Forbidden to use hard article to or chemicals in cleaning, avoiding to damage absorbent lay of the inside wall of lamp cabinet.

灯箱说明

灯箱内提供 D65、TL84、CWF、UV、F/A 等光源

采用微电脑控制，不同光源间快速切换

超强计时功能，分开记录每种光源的使用时间

所有配件均为专业进口，国际品质认证

一、灯箱介绍

标准光源对色灯箱广泛应用于纺织品、印染、印刷、塑胶、颜料、油漆、油墨、摄影等颜色领域，用于准确校对货品的颜色偏差。

因为不同光源拥有不同的辐射能量，在照射到物品上时，会显现不同的颜色。工业生产中的颜色管理，品检员虽然已仔细地对比过货品的颜色，但因为环境光源不标准或与客商所使用的光源不一致，不同光线下所看到的颜色各异，货品色差很难判定。客商验货时会因为色差超出标准范围而投诉，甚至退货，从而严重影响了公司商誉。

要有效解决上述问题，最有用的方法就是在检定货品的颜色时，必须在相

同的光源及可控制的条件下进行。例如国际通用标准中常采用人工日光 D65 作为评定货品颜色的标准光源。

特别是夜班时间，使用标准光源检定货品颜色偏差尤其重要。

灯箱内除提供 D65 光源外，同时还提供 TL84、CWF、UV、F/A 等光源，具备测试同色异谱效应的功能。

二、灯箱性能

1、国际照明学会 (CIE) 所认可的七色人工日光，其色温为 6500K。

2、光源的照度范围为 750 至 3200 勒克司 (Luxes)。

3、光源的背景颜色为吸光型中灰色 (Neutral Grey)。使用灯箱时，应尽量避免外界光线照射到被检测物品上，同时灯箱内不可放置其它杂物。

4、具备测试同色异谱效应的功能。多种光源之间采用微电脑控制刹那间快速切换的方式，以准确对比货品在不同光源下的颜色差异。灯管点亮时应避免象家用日光灯那样一闪一闪的情况。

5、准确记录每组灯管的使用时间，特别是 D65 标准灯管，在使用超过二千小时后需要换新，以免因灯管老化而引起检测误差。

6、提供紫外光源 Ultra-Violet (UV)，用于检测使用荧光及增白染料的物品，同时可以用于补充 D65 光源中的紫外光。

7、提供商店光源，国外客户要求使用其它光源作对色用，如美国客户经常要求的 Cool White Fluorescent (CWF)、欧洲及日本客户要求的 Triphosphor Lamp P15 (TL84)。这是因为货品零售是摆放在室内货架上供顾客挑选，顾客在决定是否购买该物品时是在商店灯光下进行，而并非在室外阳光光线下，所以使用商店灯光作对比颜色日益普遍。

三、操作说明

1、将电源线一头插入灯箱背面的插口，另一头插入市电电源（注意市电电源必须与灯箱标称电源相符）。此时计时显示器会显示一个流水时间，提示电源已接通。

2、按一下 ON/OFF 键，计时显示为该灯箱已使用的总时间。

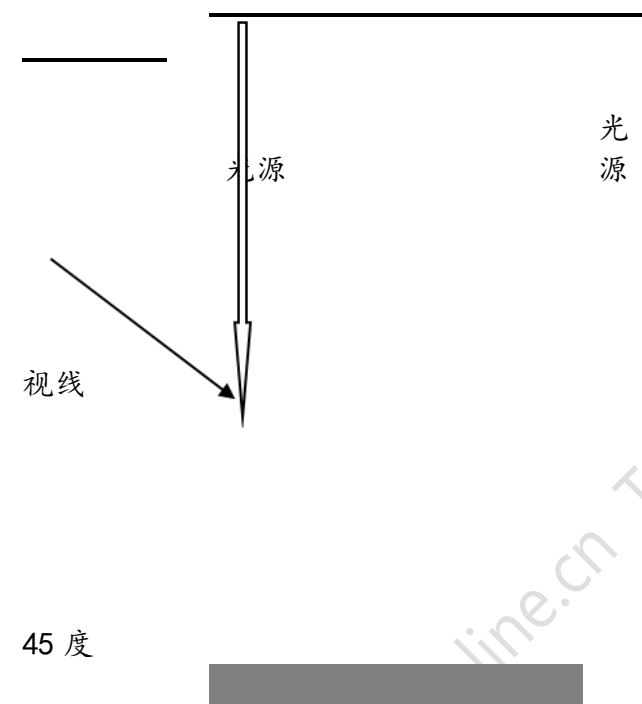
3、再按一下 D65 键，D65 灯管点亮，计时显示为 D65 灯管已使用的时间。按 F、TL84 或 UV 键，对应的该组灯管即点亮，计时显示该组灯管已使用时间。若需同时开启两种或多种光源，只需同时按下两键或多键即可。

4、将被检测品放在灯箱底板中间，在需要比较两件以上物品的颜色时，不要把它们重叠起来观看，应并排摆放在灯箱内进行比对。

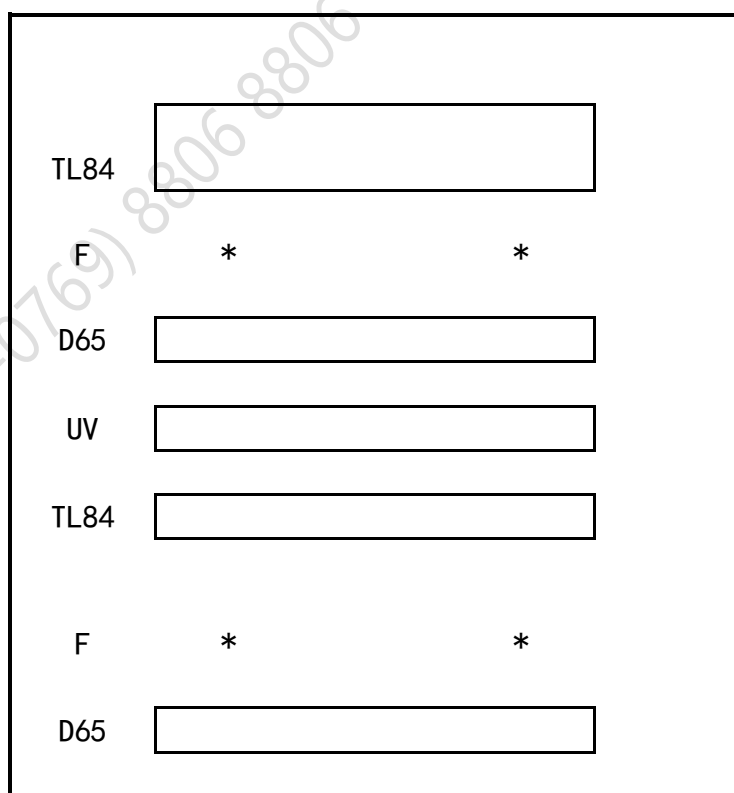
5、观察角度以 90 度光源、45 度视线为宜。如图（一）所示，光源从垂直入射角照射到被检测物品上，观察者从 45 度观察。

6、检测完毕，按一下 ON/OFF 键关机。下班或长时间不使用要关闭电源。

7、更换新灯管时，参照图（二）灯管的排列位置或灯管座处的标示进行安装，不可将不同灯管的位置搞错。更换灯管后，可将新灯管的使用时间清零（即从零重新开始计时），具体方法是点亮更换好的灯管，用小螺丝刀伸入到 CLR 中心圆孔，按一下该键即可（其它没有点亮的灯管计时不会被清零）。注意：没有更换灯管时不要使用 CLR 按键，以免将计时时间误清零。



图（一）



图（二）

四、电气参数

电源：AC 220V 50HZ

功率：小于 300W

五、灯箱保养

- 1、灯箱的免费保修期为壹年(人为损坏及灯管老化不在免费保修范围内)。
- 2、如果灯箱内板脏污应更换壁板，灯管使用超时或两端发黑老化应更换

新灯管。本公司常年提供各种标准配件（注意：更换的配件应符合标准）。

提示信息

1、如何延长灯管的使用寿命？

灯管的寿命周期主要由累积使用时间和开启次数决定。如每天使用时间较长及需要频繁开启、切换的情况，灯管的寿命周期要短一些。在一小时内，需要多次使用时，请不要关闭灯箱又反复开启，因为灯管启动点亮一次相当于连续使用一小时左右，如果较长时间不使用请及时关闭灯箱。在不必要的情况下，要尽量避免多种光源间的反复切换，以延长灯管的有效使用寿命。

2、怎样安装 CWF 光源及其它光源？

T60 标准型灯箱配备有五种类型的标准光源，其中四种光源已经安装在灯箱的固定位置上，同时配备的两支 CWF 灯管在客户需要时可以随时安装使用。具体方法是取下两支 TL84 灯管，安装上两支 CWF 灯管，此时按 TL84 按键，点亮了 CWF 光源，如果长期使用 CWF 光源，可以在胶纸上写上 CWF 字样，贴到 TL84 的按键位置。其它光源的安装使用也可以采用上述更换灯管的方法实现。

3、灯管老化了需要换新或需要其它特殊光源时如何购买？

标准光源箱内使用的灯管、灯泡，都是实验室专用的标准认证特殊光源，不同于普通民用光源。所以在使用的配件老化后，需到专业经销商处购买。本公司常年提供各种标准原配件及多种其它特殊光源，除提供 D65、TL84、CWF、UV、F 光源外，还提供 D75、D50、D35、TL83、U30、INCA、HORIZON 等国际标准光源原装进口配件。

4、灯箱壁板弄脏如何擦洗？

如果灯箱壁板、底板上沾有灰尘或存有手印等污点、污块时，可用干净白色软布蘸点清水轻轻抹擦，待水干后即可除去污物。严禁用硬物削刮及用化学物品除污，以免破坏灯箱内壁的吸光层。

为安全起见，本箱体须妥善接地。

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