FLAMINGOOPTICS

Shenzhen Flamingoo Technology Co., Ltd.

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Email:Ted@flamingoo-light.com

All Rights Reserves to Shenzhen Flamingoo Technology Co., Ltd.

ENTHUSIASM LOYALTY ELEGANCE

FLAMINGOOPTICS

FLAMINGOO

ENTHUSIASM LOYALTY ELEGANCE

Brochure

White Laser Source Technology and Light Source Module

Shenzhen Flamingoo Technology Co., Ltd.

FLAMINGOO

ENTHUSIASM LOYALTY ELEGANCE

ADVANCED WHITE LASER PRODUCTS MANUFACTURER

FLAMINGOPTICS

ADVANCED WHITE LASER PRODUCTS
MANUFACTURER

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Enterprise

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Shenzhen Flamingoo Technology Co.,Ltd.

Flamingoo is the exclusive partner of Shanghai Blue Lake Lighting Technology for oversea sales.

Established in 2015, Blue Lake is a high–tech company, focusing on research, development and innovation of white laser light. With founding team from Tsinghua University, Blue Lake has been working in laser display and specialty lighting for more than 10 years.

Blue Lake uses a high–power blue laser to pump fluorescent crystal coating, resulting in bright white light, which is 5 to 10 times higher than that of LEDs. The fluorescent material is self developed and solves the quenching problem of high luminance. Blue Lakes more than 300 patents, including over 100 invention patents, 20 international PCT patents, and 6 US patents.

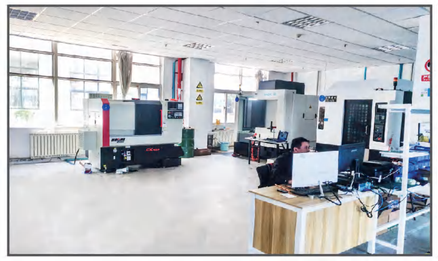
Flamingoo and Blue Lake will work together to provide you stable white laser light source.

300 Patents
(136 Innovation Patents,20 PCT,6 USA Patents)

More Than 60 Optical Experts

3 Series
10 Types

Exported to More Than 20 Countries and Regions


Machining Center

Laser Cutter

Patent Wall

AWARD & CERTIFICATION

The company's products have passed the International Electrotechnical Commission (IEC) 60825 certification, intellectual property management system certification, and won the high–tech enterprise, the sixth China International "Internet +" University Student Innovation and Entrepreneurship Competition Gold Award, Tianjin OTC third season roadshow special training camp Award of Investment Value, Aladdin Magic Lamp Award of the 24th Guangzhou International Lighting Exhibition, and Quality Award of Cross–Strait Lighting Design Competition.

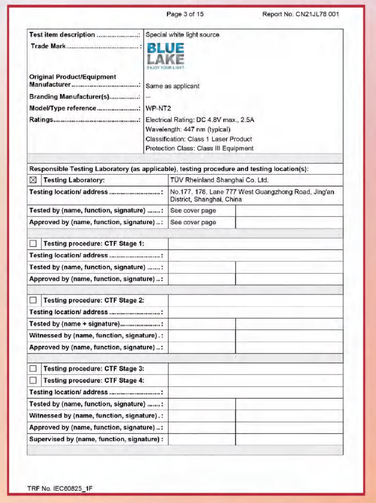
The company team is currently applying for more than 300 patents,invention patents136,practical new patent 165,12 PCT patents,enter 2 US patents.

136 Innovation Patents

165 Utility Model Patents

12 PCT

2 USA Patents



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Test item description	Special white light source
Trade Mark	BLUE LAKE
Original Product/Equipment Manufacturer	Same as applicant
Branding Manufacturer(s)	-
Model/Type reference	WP-N72
Ratings	Electrical Rating: DC 4.8V max., 2.5A Wavelength: 447 nm (typical) Classification: Class 1 Laser Product Protection Class: Class III Equipment

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒ Testing Laboratory:	TÜV Rheinland Shanghai Co. Ltd.	
Testing location/ address	No.177, 178, Lane 777 West Guangzhong Road, Jing'an District, Shanghai, China	
Tested by (name, function, signature)	See cover page	
Approved by (name, function, signature)	See cover page	
☐ Testing procedure: CTF Stage 1:		
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature)		
☐ Testing procedure: CTF Stage 2:		
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name, function, signature)		
Approved by (name, function, signature)		
☐ Testing procedure: CTF Stage 3:		
☐ Testing procedure: CTF Stage 4:		
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature)		
Approved by (name, function, signature)		
Supervised by (name, function, signature)		

TRF No. IEC60825_1F

HUAZHI 华知认证

知识产权管理体系认证证书

【证书编号】：47021J13438R0

兹证明

上海蓝湖照明科技有限公司

统一社会信用代码：91310113MA7D9920X

注册地址：上海市宝山区淞兴路 457 号 2 楼 B 区 391 室

申请地址：上海市宝山区淞兴路 457 号 2 楼 B 区 391 室

知识产权管理体系符合标准：GB/T29490-2013

通过认证范围：

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首次发证日期：2019 年 12 月 11 日 本次发证日期：2019 年 12 月 11 日 有效期至日期：2022 年 12 月 10 日

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签发：

华知认证有限公司

注册地址：上海浦东新区张江镇张衡路 666 号 1504 室

天津OTC Tianjin OTC

天津OTC第三季路演特训营

最具投资价值奖

天津滨海柜台交易市场股份公司

2019年8月

高新技术企业

证书

企业名称：上海蓝湖照明科技有限公司

证书编号：GR201931004518

发证时间：2019 年 12 月 6 日

有 效 期：三年

批准机关：

上海市科学技术委员会 上海市财政局 国家税务总局上海市税务局

获奖证书

Certificate of Award

杨毅、张庆立、阎宏宸、李月、王婷、哈布日、丁思同、赵雅五、康翔宇、郭骥、宋秋阳、王泰成、姜庆玉、范正斌、王宇：

你们的作品《用激光照亮未来——白激光光引擎技术的开发和产业化》，在第六届中国国际"互联网+"大学生创新创业大赛中荣获 金奖

指导老师：庄松林、邵雅红、李阳、董祥美、高秀敏

特发此证，以资鼓励。

主办单位：

教育部、中央统战部、中央网信安全和信息化委员会办公室、

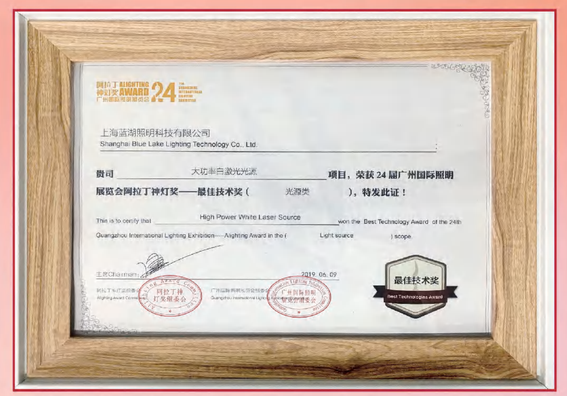
国家发展和改革委员会、工业和信息化部、人力资源和社会保障部、

农业农村部、中国科学院、中国工程院、国家知识产权局、

国务院扶贫开发领导小组办公室、共青团中央、广东省人民政府

中国国际"互联网+"大学生创新创业大赛组委会

证书编号：2020



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上海蓝湖照明科技有限公司

Shanghai Blue Lake Lighting Technology Co., Ltd

授司 大功率白激光光源 项目，荣获 24 届广州国际照明展览会阿拉丁神灯奖——最佳技术奖（ 光源类 ），特发此证！

This is to certify that High Power White Laser Source won the Best Technology Award of the 24th Guangzhou International Lighting Exhibition—Alighting Award in the Light source scope.

2019. 06. 09

最佳技术奖

Best Technologies Award

海峡两岸照明設計大賽

The Cross-Strait Lighting Design Award

作品：白激光迷你手电

Entries：White Laser Mini Flashlight

優質獎

Fine Award

上海蓝湖照明科技有限公司

Shanghai Blue Lake Lighting Technology Ltd.

2019.10.25

Technology

White Laser Source Technology

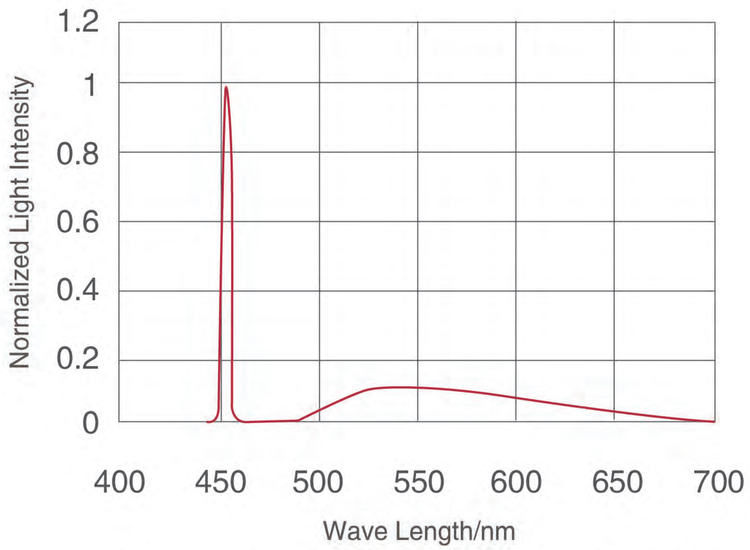
- How White Laser Works 09
- Core Technology 11

HOW WHITE LASER WORKS

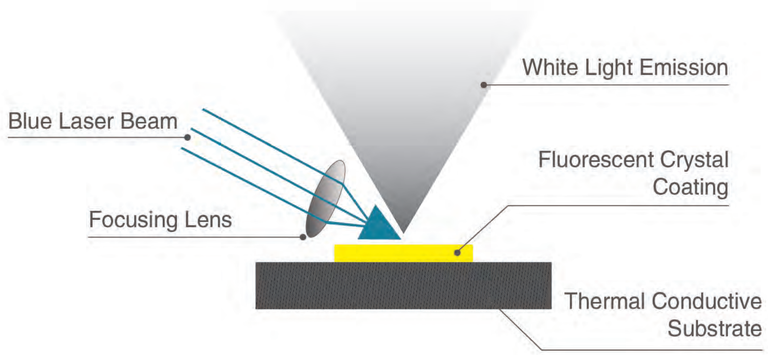
Blue Lake uses blue laser to excite yellow phosphor to deliver broad spectrum white light, which is the core technology of Blue Lake. As showed, the blue laser pumps upon the phosphor crystal coating (Phosphor Crystal Coating, PCC) and causes it to produce yellow light. The yellow light and the unabsorbed blue light form the white light. Since the yellow light is broad spectrum, the white light is also broad spectrum. The white laser light source is an ideal light source for illumination, with no color distortion.

The laser beam pumps upon a point on the phosphor to excite the the light, the intensity of white light is very high, closed to xenon, making it ideal for lighting choice.

Spectrum

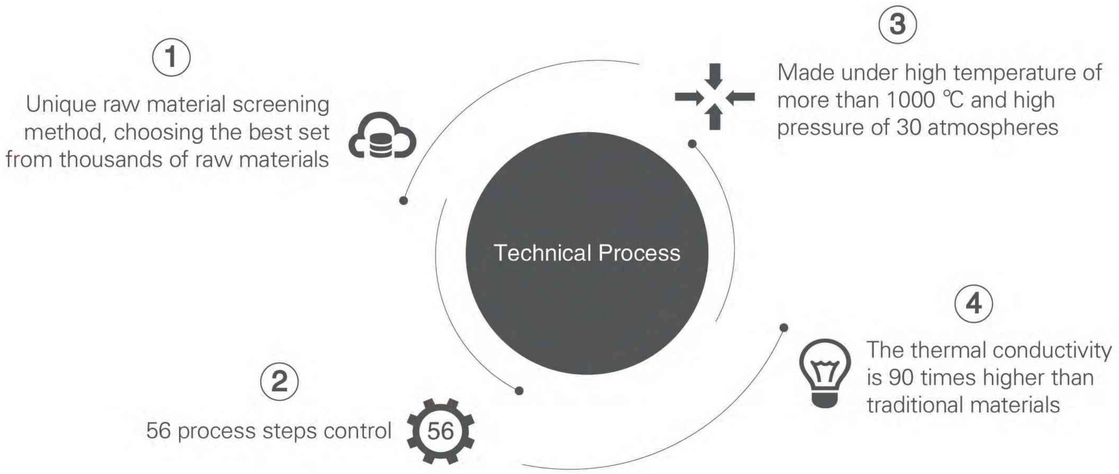


(Note:It can be modified to wide spectrum or high CRI spectrum)



Mechanism of White Laser

WHITE LASER SOURCE TECHNOLOGY

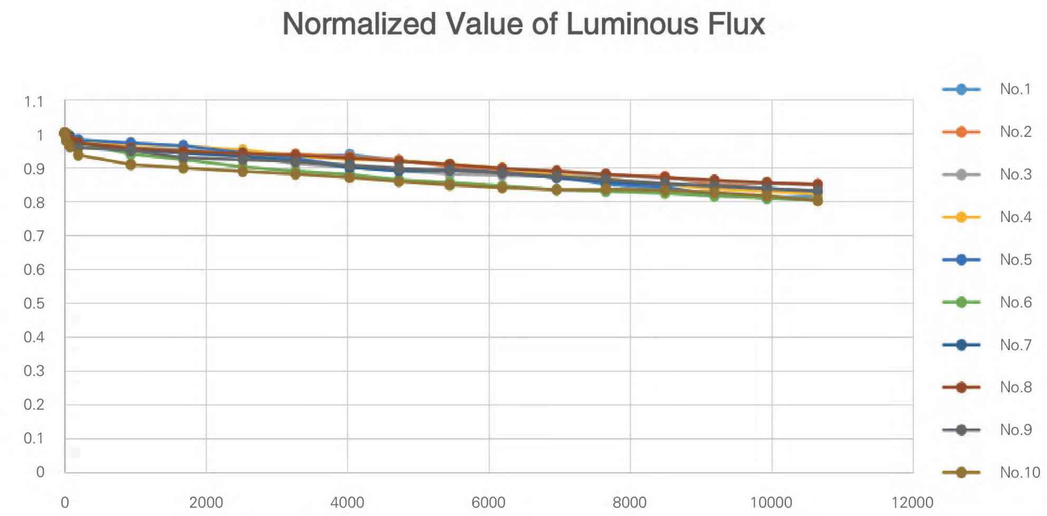


Production Equipment of Fluorescent Crystal Coating

2,000 ㎡ 10,000 Class Ultra Clean Room

Yellow Photolithography Workshop

Phosphor Crystal Coating Aging Test



Date	3.9	3.10	3.12	3.17	4.17	5.18	6.22	7.23	8.24	9.22	10.22	11.22	12.24	1.22	2.26	3.27	4.27	5.27
NO.	Luminous Flux																	
1	522	517	515	511	498	495	493	488	489	480	473	465	456	443	435	428	422	425
2	516	514	510	505	494	487	486	484	480	47	465	459	457	452	450	437	440	438
3	497	495	485	478	478	473	465	452	447	442	437	435	433	435	431	426	423	421
4	503	501	497	491	487	484	478	469	464	462	457	451	440	435	427	420	417	412
5	516	514	510	506	501	497	486	478	465	459	461	456	448	440	434	421	418	414
6	501	492	497	487	470	462	451	445	440	432	428	423	417	415	412	408	405	402
7	496	494	491	482	472	467	462	456	446	441	442	438	431	425	421	419	415	411
8	519	516	510	504	496	491	488	485	481	476	471	465	461	456	451	447	443	440
9	511	505	491	489	485	474	471	468	463	458	455	451	446	441	435	431	427	424
10	497	486	478	465	451	446	441	437	432	426	421	417	414	415	413	410	405	398

Safety Certification

It has been tested and certified by German Rhine TUV and reached class I safety standard

Page 3 of 15 Report No. CN21JL78 001

Test item description .....:	Special white light source
Trade Mark .....:	BLUE LAKE ENJOY YOUR LIGHT
Original Product/Equipment Manufacturer .....:	Same as applicant
Branding Manufacturer(s) .....:	--
Model/Type reference .....:	WP-NT2
Ratings .....:	Electrical Rating: DC 4.8V max., 2.5A Wavelength: 447 nm (typical) Classification: Class 1 Laser Product Protection Class: Class III Equipment

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ **Testing Laboratory:**	TÜV Rheinland Shanghai Co. Ltd.	
Testing location/ address .....:	No.177, 178, Lane 777 West Guangzhong Road, Jing'an District, Shanghai, China	
Tested by (name, function, signature) .....:	See cover page	
Approved by (name, function, signature) ..:	See cover page	
☐ **Testing procedure: CTF Stage 1:**		
Testing location/ address .....:		
Tested by (name, function, signature) .....:		
Approved by (name, function, signature) ..:		
☐ **Testing procedure: CTF Stage 2:**		
Testing location/ address .....:		
Tested by (name + signature).....:		
Witnessed by (name, function, signature) .:		
Approved by (name, function, signature) ..:		
☐ **Testing procedure: CTF Stage 3:**		
☐ **Testing procedure: CTF Stage 4:**		
Testing location/ address .....:		
Tested by (name, function, signature) .....:		
Witnessed by (name, function, signature) .:		
Approved by (name, function, signature) ..:		
Supervised by (name, function, signature) :		

TRF No. IEC60825_1F

Produkte
Products

TÜVRheinland®

Prüfbericht-Nr.: *Test Report No.:*	**CN21JL78 001**	**Auftrags-Nr.:** *Order No.:*	244311465	Seite 1 von 15 *Page 1 of 15*
Kunden-Referenz-Nr.: *Client Reference No.:*	2285941	**Auftragsdatum:** *Order date:*	2020. 10. 22	
Auftraggeber: *Client:*	See following page for details			
Prüfgegenstand: *Test item:*	Special white light source			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	WP-NT2			
Auftrags-Inhalt: *Order content:*	Test Report			
Prüfgrundlage: *Test specification:*	IEC 60825-1:2014 EN 60825-1:2014			
Wareneingangsdatum: *Date of receipt:*	2021.01.22	See photo document for details.		
Prüfmuster-Nr.: *Test sample No.:*	A002981499-001			
Prüfzeitraum: *Testing period:*	2021.01.22 – 2021.01.22			
Ort der Prüfung: *Place of testing:*	TÜV Rheinland Shanghai Co. Ltd.			
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland Shanghai Co. Ltd.			
Prüfergebnis*: *Test result*:*	Pass			

geprüft von / *tested by:*

2021.03.08	Roy Chen / PE	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

kontrolliert von / *reviewed by:*

2021.03.08	Vic Xin / Reviewer	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other:*

See following pages for details.

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.

\/04

TÜV Rheinland Shanghai Co. Ltd. No.177, 178, Lane 777 West Guangzhong Road, Jing'an District, Shanghai, China

Product

Lighting Application 17

- Low Power Source(<30W) 17
- Medium Power Source (30–100W) 33
- High Power Source(>100W) 39

Special Application 44

- Ultra High Brightness Source 45
- Broad Spectrum / Infrared Source 47
- High CRI Source 48

Star Decoration Lamp Module 49

LASER LIGHT SOURCE FOR LIGHTING

Low Power Source(<30W)

Appearance

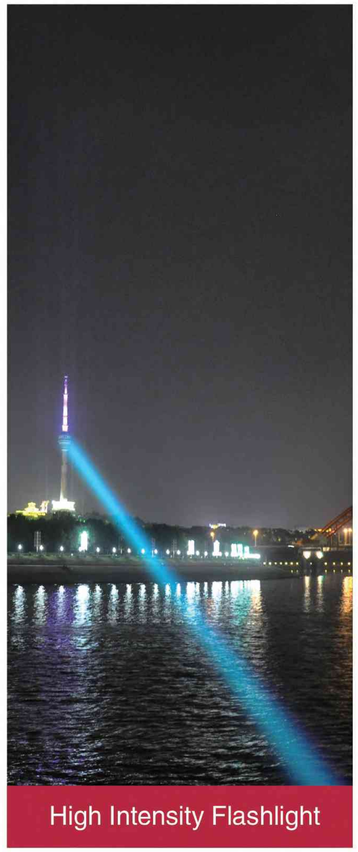
Model	Rx	Rx (High-End)	CT1	CT1-mini	CT1-Flat	NT2	TYX (High-Lumen)	TYX (Headlight)
Luminous Flux (lm)	500	650	370	370	370	570	950	630
Brightness (cd/mm²)	850	1180	770	770	770	1000	950	630
Spot Uniformity	★★★★★	★★★★★	★★★☆☆	★★★☆☆	★★★☆☆	★★★★★	★★★★★	★★★★★
Price Advantage	★★★☆☆	★★★☆☆	★★★★★	★★★★★	★★★★★	★★★☆☆	★★★☆☆	★★★☆☆
Structural Adaptability	★★★☆☆	★★★☆☆	★★★★☆	★★★★☆	★★★★☆	★★★★★	★★★★★	★★★★★
Others	/	/	/	/	/	Customizable	/	/

Application Scenario

Car Headlamp

UAE Lighting

Tactical Flashlight


High Intensity Flashlight