First and foremost, we are laser enthusiasts. We desire nothing more than to achieve perfection in our craft. For us, pushing the limits of technology is part of our daily routine. It’s only impossible if we don’t try.

As we continue to advance in our search for perfection, we’ve set benchmarks for others to follow and new limits for us to test. This is our mission. We plan to continually push the boundaries of technology and create products that challenge the imagination far into the future.

Absolute power. Unmatched performance. Exceptional durability. “Wicked” isn’t just our name, it is what we are. Those who seek us know what real lasers are about. What once was science fiction is now reality. A technological revolution has begun.

Keep in mind, this is not a toy and this is definitely not a laser pointer. This is a Wicked Laser.
We wanted to create the world’s most powerful handheld laser - we succeeded and inadvertently set a world record in doing so. We are extremely proud to be included in the Guinness Book of World Records for 2007. This will serve as a testament to our commitment to providing the world with the most sophisticated laser products technology can offer.

Designed and developed by some of the world’s best engineers, the Spyder Series stands at the pinnacle of laser technology. Lithium powered, water-proof and ultimately powerful, the Spyder Series is our most advanced line of handheld lasers to date.

We still have much to prove as there is still a world of possibilities in front of us. Our quest to turn science fiction into reality has only just begun.

Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>S3 Series</td>
<td>2</td>
</tr>
<tr>
<td>E3 Series</td>
<td>4</td>
</tr>
<tr>
<td>E2 Series</td>
<td>6</td>
</tr>
<tr>
<td>Core Series</td>
<td>8</td>
</tr>
<tr>
<td>FlashTorch</td>
<td>10</td>
</tr>
<tr>
<td>Laser Diagram (Core &amp; E3 Series)</td>
<td>12</td>
</tr>
<tr>
<td>Laser Diagram (S3 Series)</td>
<td>14</td>
</tr>
<tr>
<td>Using Your Laser</td>
<td>16</td>
</tr>
<tr>
<td>FDA Compliant Endcap</td>
<td>18</td>
</tr>
<tr>
<td>How to use the SmartSwitch™ 2.0</td>
<td>22</td>
</tr>
<tr>
<td>Safety and Maintenance</td>
<td>27</td>
</tr>
<tr>
<td>How Intensively the Human Eye Perceives Different Colors</td>
<td>28</td>
</tr>
<tr>
<td>Class 4 Laser Safety Instructions</td>
<td>29</td>
</tr>
<tr>
<td>Lens Cleaning Procedure and Troubleshooting</td>
<td>34</td>
</tr>
<tr>
<td>Types of Common Lens Problems</td>
<td>35</td>
</tr>
<tr>
<td>Limitation of Liability</td>
<td>38</td>
</tr>
<tr>
<td>Manufacturer’s Warranty</td>
<td>39</td>
</tr>
<tr>
<td>Laser Labels</td>
<td>41</td>
</tr>
</tbody>
</table>
S3 Arctic Series

The S3 Spyder III Arctic is the most powerful handheld laser you can legally own. It’s got a cool-blue, but blazing-hot, 1W laser beam.

Completely legal laser power. The 1000 mW output power of the blue laser beam is able to burn through balloons, plastic, and much more.

Strong laser in a strong body. The aircraft grade aluminum chassis lets you be confident that the body is as tough as the laser is strong.

More than just power. This is the first laser to have multiple operating modes. You have total control of the 1 Watt laser beam.

Powerful safety features. The SmartSwitch™ technology locks out unauthorized access to your laser making your laser safe when you’re not around.

Model Name: S3 Arctic Series
Laser Product Class: 4
Size: 228mm x 35.8mm
Weight: 378g
Laser Body: 6061-T6 Aircraft Grade Aluminum
Max Power: 1000mW
Min Power: 500mW
Wavelength: 445nm nominal center λ
Lasing Medium: GaN
Laser Type: Direct Diode
Beam Diameter: 5 mm
Beam Divergence: 1.5mRad
NOHD*: 149 meters
Required Eyewear O.D.: 3.0+
Power Consumption: 3.7V @ 1A
Battery lifetime: 120 mins
Power supply: Sanyo Lithium 18650
Switch: Push Button Constant On / Off Lock- Out Tail Cap, Electronic Mode switch
Duty Cycle: Continuous
Expected lifetime: >5,000 hours
Warranty: 12 Months
E3 Elite Series

If a secret agent had to choose a laser this would be it. This is a high-power laser that comes in your choice of high power colors – green, red, and purple.

Sleek and sexy. The thin profile and smooth gunmetal finish makes the body alone something to drool about. This laser combines sex appeal and durability, so you don’t have to sacrifice looks for quality.

Not-so-secret power. The E3 is known as for its smooth undercover casing. They always say, “be careful with the quiet ones”. The high power (300mW) of the E3 is 50-100 times as strong as any standard laser pointer.

Blockbuster colors. For a laser that fits in your pocket you’ll be surprised at how bold the red, green, and purple laser beams stand out.
E2 Evolution Series

Elegant, efficient and superbly engineered, the E2 Series is a two AA battery-powered pen sized laser.

Precision crafted from T6061 aircraft grade aluminum, the hard black anodized compact laser represents a blend of both art and power. Incorporating state-of-the-art high efficiency diode and crystal arrays as well as high quality AR coated-optics to provide optimal beam quality, the E2 Series is frequently the industry’s choice for professional applications.

Available in your choice of three different wavelengths; 405nm purple, 532nm green, and 650nm red, the Wicked Lasers E2 Series represents an excellent choice for your professional laser needs.
Core Series

What can you expect from a laser pointer from the home of the world’s most powerful FDA certified laser?

A better laser beam. Standard laser pointers fade after a few minutes. Never worry about losing their attention with the CORE™’s negative-feedback sensor system. You get the same stunning beam from the second you turn it on to the last second of battery power.

More power. Big box store lasers give you small-package power. This laser gives you 2 to 5 times the power of standard laser pointers. The CORE™ is the brightest 5mW laser you can buy.

A safe attention-getter. As a class 3B laser it’s perfectly safe for presentations and star gazing (as long as you’re responsible don’t point it at eyes, planes and vehicles).

Model Name: The Core
Laser Product Class: 3A
Wavelength: 532nm
Laser Power: 5mW
Beam Divergence: 1.2mRad
Beam Diameter: 1.5mm
Size: 13x148mm
Laser Body: Black Polished Brass
Transverse Mode: TEM00
Power Consumption: 300mA
Power supply: 2 x AAA 1.5V
Battery Lifetime: 180 min
Switch: Momentary On / Off Button
Duty Cycle: Continuous Wave
Expected lifetime: >5,000 hours
Warranty: 12 Months
The discovery of fire is one of the greatest discoveries known to mankind. Now discover the FlashTorch...

This FlashTorch burns bright. Currently being tested by Guinness World Records this is the world’s brightest and most powerful flashlight. With 4100 lumens of raw light power, it’s a full 100 lumens brighter than the previous record holder.

The FlashTorch can burn hot. You can hold the body of the flashlight as the heat-resistant lens burns plastic, lights paper on fire, and cooks eggs and marshmallows. For a bright light or light-grilling this is the perfect accessory for the outdoor enthusiast.

Built for the 21st century. The 100 Watt halogen bulb is fitted with a durable high-heat rated lens. The casing is made of aerospace-grade aluminum.

<table>
<thead>
<tr>
<th>Name:</th>
<th>The FlashTorch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamp Output:</td>
<td>4100 Lumens with an Adjustable High Efficiency Reflector</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>57mm x 230mm</td>
</tr>
<tr>
<td>Power Supply:</td>
<td>12x2/3A 1500mAh Cells 14.4V</td>
</tr>
<tr>
<td>Battery Lifetime:</td>
<td>5 Minutes</td>
</tr>
<tr>
<td>Bulb Type:</td>
<td>100W Halogen</td>
</tr>
<tr>
<td>Expected Bulb Life:</td>
<td>2000 Hours</td>
</tr>
<tr>
<td>Casing:</td>
<td>Aerospace Grade Aluminum</td>
</tr>
<tr>
<td>Tail switch:</td>
<td>On/Off Button</td>
</tr>
<tr>
<td>Warranty:</td>
<td>12 Months</td>
</tr>
</tbody>
</table>
Laser Diagram (fig 1.a Core, E2 and E3 Series)

Note: Only the E2, E3 and S3 Series are equipped with an emission indicator.

Laser Diagram (fig 1.b Core, E2 and E3 Series)
Laser Diagram (fig 2.a S3 Series)

Removable Lens Protector
FDA Compliant Endcap
SmartSwitch Button
Contact Guard

Laser Diagram (fig 2.b S3 Series)

Removable Lens Protector
FDA Compliant Endcap
Laser Aperture
Power Button
Emission/Battery Indicator
Safety Interlock
Using Your Laser - Core, E2 & E3 Series (fig 3.a)

At the back of the laser, rotate endcap counter clockwise to open.

Insert two batteries ("AAA" for E3 and Core Series, "AA" for E2 Series) negative (-) end first.

Press button for operation. **Note:** Only the E2, E3 and S3 Series are equipped with an emission indicator.

Using Your Laser - S3 Series (fig 3.b)

At the back of the laser, rotate endcap counter clockwise to open.

Insert one Li-Ion Type 18650 IMR rechargeable battery negative (-) end first.

Push the button located on the tail cap to operate laser.

**NOTE:** Do not attempt to use a different battery type for this laser, doing so might damage the laser and void the warranty.
Using Your **FDA Compliant Endcap** (fig 4.b E2 and E3 Series)

1. Interlock Connection Point  
2. Switch Contact / Spring  
3. Jumper Wire  
4. Remote Interlock Housing  
5. Battery Cap  
6. Key Control

---

**Top View**

**Perspective View**

---

**FDA Compliant Endcap Diagram** (fig 4.a E2 and E3 Series)
Removing the Safety Interlock from the Endcap will disable the laser. Another way to disable the laser is by unscrewing the Contact Guard as shown here. Remove screws to detach Contact Guard and disable the laser.
How To Use The SmartSwitch™ 2.0

The S3 Series are the world’s first and only handheld laser with SmartSwitch™ technology. SmartSwitch™ combines both safety and intelligence by requiring the user to follow a protocol of simple clicks and click/holds to operate the device.

In addition to the FDA specified hardware key lock a secondary software key input must be performed to power on the device. This safety code is an unlock requirement and is designed to prevent accidental and unauthorized use.

Once unlocked the laser has a default low power mode of operation that is set at 10% of the maximum power, again designed for safety.

The following 9 modes are enabled by using the SmartSwitch™ 2.0:
▪ Strobe Mode (Hi / Low)
▪ Continuous Wave (Hi / Low)
▪ SOS (Hi / Low)
▪ Beacon (Hi / Low)
▪ Tactical Hibernation Mode

Unlocking Your Laser: This is the first code you should remember three short clicks + two short holds will let you unlock the laser.

Once the power is on, the user can toggle between low power and high power and can also choose between momentary on, pulse wave (strobe) and continuous wave with a few simple clicks.

The preprogrammed circuitry runs on a clock timer which has presets for auto off timings, secure hibernation and re-lock.
WICKED LASERS Master Guide | 25

How To Use The SmartSwitch™ 2.0

SmartSwitch™ 2.0 Codes:

After unlocking your laser, you can select among the active modes by using one of these following codes when pressing the button:

- A long hold (holding down briefly for less than a second) cycles between high power and low power.
- A short hold cycles Strobe mode to Continuous Wave mode.
- Clicking 3 times within 2 seconds goes into SOS mode.
- From SOS mode, one quick press will change it into Beacon mode.
- From Beacon mode, one quick press will change it to low power Strobe mode.
- Holding the switch for 3 seconds will go to Tactical Hibernation mode. The middle LED will be flashing to indicate this.

1. Push the Power Button on the Tailcap to turn on your laser. The first LED will start flashing indicating the laser is ready to be unlocked.

2. Click on the SmartSwitch™ button. After the first click the first LED will be ON and the second LED will start flashing.

3. Click the button again. The first and second LEDs will be steady and the third LED will start flashing.

4. Click the button a third time. Both first and second LEDs will start flashing.
How To Use The SmartSwitch™ 2.0

5. **Hold** down the button briefly and the second and third LEDs will start flashing.

6. **Hold** down the button briefly again and all three LEDs will flash three times, then goes into battery indicator status.

Code sequences should be performed consecutively otherwise it will reset if you pause in between clicking or holding for too long.

After correctly entering the code sequence to unlock the laser, the laser will automatically be turned ON to its default setting and operate in low power/strobe mode.

Safety and Maintenance

1. No scheduled maintenance necessary to keep the product in compliance. Simply keep the laser free from dust or other contaminates that could cloud or dirty the laser lens or crystal array and operate within recommended parameters.

2. Avoid direct eye and skin exposure to the laser beam. Direct contact with the beam can instantly cause severe and irreparable eye damage. Note that a reflected laser beam can be just as powerful as directly coming from the laser unit itself.

3. We strongly recommend using the LaserShades that come with this laser or wearing similar approved laser safety eyewear.

4. Do not take apart, modify or dismantle the laser or operate it under abnormal current load (doing so will void the warranty). Strictly no service is allowed.

5. Operate your laser only within the specified temperature range of 10°C (50°F) to 40°C (104°F).

6. Should you have difficulty operating the laser properly and troubleshooting does not work, go to www.wickedlasers.com for support and RMA assistance if necessary. Do not attempt to service, modify or fix the laser yourself.

7. Do not shine your laser at an aircraft. It may cause a distraction to the pilots putting the aircraft’s passengers at considerable risk. Shooting a laser at an aircraft is considered a felony in the U.S.


CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
Class 4 Laser Safety Instructions

**DANGER CLASS 4 LASER:** All visible lasers with beams over 500 milliwatts (1/2 watt) are classified as Class 4.

- **EXTREME DANGER, MUST BE USED CAREFULLY**
- **DO NOT USE AS A LASER POINTER.**
- **DO NOT USE AS A TOY.**
- **ONLY FOR USE BY PERSONS UNDERSTANDING THE HAZARDS OF THIS LASER.**
- **READ ALL WARNINGS ON THIS PAGE.**

**DO NOT SHINE DIRECT BEAM IN EYE - BLINDNESS HAZARD!** The direct beam at close distance can cause instant blindness. The direct beam up to 250m/750ft can cause eye damage. Never aim any laser towards a person’s head, or where a person may suddenly appear. Never aim towards a pet or other animal.

**DO NOT GET REFLECTED BEAM IN EYE** The beam reflection can cause instant eye damage, especially at close range. There are MANY shiny or smooth objects that can reflect a laser beam. ALWAYS be aware of both the main beam AND its reflection(s). Be especially careful when aiming out of windows due to danger from the “back reflection”.

---

**How Intensely the Human Eye Perceives Different Colors**

Based on the human eye’s perception:
- Equal powers of green 532nm light is 20 times brighter than blue 455nm light, 8 times brighter than red 650nm light, and 190 times brighter than purple 405nm light.

---

**Based on the human eye’s perception:**
- Equal powers of green 532nm light is 20 times brighter than blue 455nm light.
- 8 times brighter than red 650nm light.
- 190 times brighter than purple 405nm light.
DO NOT LOOK OR STARE AT DIFFUSED REFLECTIONS
Looking at the laser “dot” can cause eye damage. Danger is higher when on white surfaces and at close range. DO NOT USE THIS AS A LASER POINTER.

DO NOT SHINE BEAM ON SKIN - BURN HAZARD
The direct or reflected beam can burn exposed skin. Wear protective, light-colored clothing. Do not aim beam at your skin, skin of other persons, or animals.

DO NOT BURN OR DAMAGE MATERIALS
The beam can char, burn or ignite materials. Especially avoid dark, thin, and combustible materials such as fabrics.

DO NOT AIM AT AIRCRAFT OR STARS
The bright light from this laser can flashblind or distract a pilot. NEVER AIM ANY LASER TOWARDS AN AIRPLANE OR HELICOPTER. Always be careful any time the beam goes into the sky. Since far-away aircraft can look like stars, DO NOT USE FOR STAR POINTING. Only use Class 2 or Class 3 lasers for astronomy star pointing purposes.
Class 4 Laser Safety Instructions

AVOID EXPOSURE TO BLUE LIGHT
Blue laser light can cause photochemical eye damage. Avoid prolonged exposure to blue light (light from 530nm green to 380 nanometers ultraviolet can be hazardous, with the peak danger at 440nm blue). There is a hazard even from prolonged exposure to diffuse “room glow” from the beam reflecting off walls or other surfaces. Use safety glasses that block blue light.

WEAR SAFETY GLASSES
If available, wear laser safety glasses or goggles. They MUST be appropriate for your laser’s power and wavelength, so the laser beam’s power is safely reduced. However, DO NOT RELY ON THE SAFETY GLASSES ALONE. Continue to avoid direct and reflected exposure to the beam.

Class 4 Laser Safety Instructions

OTHER IMPORTANT SAFETY AND USE CAUTIONS:

DO NOT USE AS A LASER POINTER. This Class 4 laser is too bright to be safely used for laser pointing purposes.

NOT FOR CHILDREN OR UNAWARE PERSONS. The user must be mature, and must be aware of the direct and reflected beam hazards to eyes, skin, materials and aircraft.

DO NOT USE ILLEGALLY. Many countries and jurisdictions have laws regarding laser usage. Follow all local laws.

DO NOT AIM AT VEHICLES. Do not distract the driver of a car or truck, or a person operating heavy or dangerous machinery.

DO NOT AIM AT POLICE OR LAW ENFORCEMENT. The beam can be mistaken for a weapon, or for a laser gunsight. People aiming lasers at police and soldiers have been killed.

DO NOT HARASS OR ANNOY OTHERS. Do not aim at sporting players, persons in a band, a movie theater screen, passersby or any other use where the beam is distracting to others. Understand that if people are upset by laser pointer misuse, they will support laws to ban pointers.

AVOID EXPOSURE TO BLUE LIGHT
Blue laser light can cause photochemical eye damage. Avoid prolonged exposure to blue light (light from 530nm green to 380 nanometers ultraviolet can be hazardous, with the peak danger at 440nm blue). There is a hazard even from prolonged exposure to diffuse “room glow” from the beam reflecting off walls or other surfaces. Use safety glasses that block blue light.

WEAR SAFETY GLASSES
If available, wear laser safety glasses or goggles. They MUST be appropriate for your laser’s power and wavelength, so the laser beam’s power is safely reduced. However, DO NOT RELY ON THE SAFETY GLASSES ALONE. Continue to avoid direct and reflected exposure to the beam.
Lens Cleaning Procedure and Troubleshooting

What you need:

1. Microfiber Cloth - Please make sure the microfiber cloth is specifically designed for cleaning lenses. You can find this at your local camera or glasses store.

2. Q-Tip or Tooth Pick - You will need to fold the cloth over one of these in order to be able to reach the lens properly.

3. Lens Cleaning Solutions (Optional) - Use the lens cleaning solution only if the lens is not cleaned using the microfiber cloth alone. Please make sure the cleaning solution is designed specifically for lens cleaning.

WARNING: DO NOT USE WATER

Procedure:

1. Wash your hand with soap and water. Make sure to dry them properly.
2. Remove the batteries from your laser prior to cleaning.
3. Fold the microfibre cloth over a toothpick or the handle part of a Q-tip. Make sure you do not touch the part of the cloth that will be cleaning the lens. You probably will not be able to fold the cloth twice, so you need to be very careful not to press too hard on the lens.
4. Gently move the cloth into the aperture until it comes in contact with the lens. Rub it from side to side but do not press too hard. Gently rotate the cloth in a twisting motion back and forth. Repeat this procedure until the lens of your laser is clean.
5. Re-insert the batteries and turn your laser unit on to see if the lens is clean.
6. Still dirty? Apply only 1 drop of Lens Cleaning Solution to the part of the cloth that will be cleaning the lens, then follow the same procedure as above. You will want to finish by using a dry part of the cloth to wipe the lens dry, this should take one pass side to side or gentle rotate.

Types of Common Lens Problems

1. Dirty Lens - The most common problem with your laser unit is a dirty lens. The easiest way to determine whether you have a dirty lens is to look at the lens under direct light. If you see smudges, finger prints, or small particles on the lens, the beam emitted will look similar to the above pictures. Simply follow the cleaning instructions to restore the spot back to a focused dot.

2. Scratched Lens - A scratched lens may occur if you accidentally scratch the lens with a hard or rough surface. The lens of your laser unit is similar to that of a camera, please handle with care. This condition can be repaired by Wicked Lasers, however, will not be covered in your warranty. A repair cost will apply.
3. **Mode Shifts** - A mode shift may occur under extreme temperatures. If your laser unit is too hot or too cold, the beam may appear unstable and look similar to the above pictures. Please note that as your laser “warms up” and returns to room temperature, the beam will return to normal mode, TEM00. The normal operating temperature of all Wicked Laser products is 10°C ~ 40°C. Using your laser unit beyond these parameters will damage your laser beyond repair.

4. **Moisture** - We do not recommend using any laser products in highly humid or foggy conditions. If your laser unit is used in these conditions and/or submerged in water, the beam may appear similar to the above picture. You will not be able to clean this as water has condensed inside the lens and/or crystal set. This condition can be repaired by Wicked Lasers, however, will not be covered in your warranty. A repair cost will apply.

*This condition may occur if you are using the laser unit with wet hands. Please dry your hands completely before handling your laser unit.
Manufacturers Warranty

All E2 Evolution Series, E3 Elite Series, S3 Spyder Series, The Core and The Torch come with a 1 Year Manufacturer’s Warranty. Our warranty guarantees your laser to be free from defects in manufacture and workmanship.

All defective lasers will be replaced or repaired subject to the full discretion of Wicked Lasers.

Ownership of the warranty is not transferable and will expire exactly 12 months from the date of receiving the purchase.

Limitation of Liability

In no event shall Wicked Lasers or any of its subsidiaries or affiliates be liable for any indirect, special, incidental or consequential injury to persons or damage to property caused by the use of any of our products. By purchasing from Wicked Lasers, you hereby indicate that you understand and agree to the following:

- I am 18 years of age or older.
- I am fully responsible for the safe application and use of this laser and agree to such by completing the sale process.
- I will never look directly into the beam or point the beam at any person’s or animal’s skin, eyes or other body part.
- I will not point the laser at any aircraft or moving vehicle of any sort.
- I will not use a laser device without wearing approved laser safety goggles designed for such purpose.
- I will never remove the laser’s infrared filter.

I will not use the laser in violation of any local, state or federal law, and I understand that it is my responsibility to know and abide by those laws relating to the ownership and use of lasers in my jurisdiction.
This warranty does not include defects or damages attributable to misuse, normal surface weathering, or damages caused by accidents or fire or other casualty or force majeure or any other causes or occurrences beyond the manufacturer’s control.

To claim your warranty, please send this form or email support@wickedlasers.com with the following information:

Full Name: _____________________________
Address: _______________________________

Order ID / Laser Model: _____________________
Reason for Claim: __________________________

Class 3B 405nm

Class 3B 532nm

Class 3B 650nm
There’s no turning back. You’re one of us now. Peace and enjoy your laser.

Steve Liu
CEO Wicked Lasers