



FLOWLIGHT G2 - OPTIMIZATION GUIDE

The flowlight was born of a passion for beauty and movement, and engineered to meet the need for a high-performance, rechargeable light source for kinetic activities and entertainment.

The flowlight serves as a versatile pixel of light in the Flowtoys Modular System with the ability to link to each other and fit into a variety of poi, staffs, juggling and martial flow props. They are interchangeable among various flowtoys, so feel free to mix, match and switch them around.



Clip a flowlight to your backpack or bicycle. Use it as a flashlight or for ambient lighting, while you are at a festival, camping, or at home. With 11 modes, 2 brightness settings, and a range of beautiful color schemes, the possibilities are limited only by your imagination.

Your flowlight is a high-performance electronic instrument. We think of it like a musical instrument, sports equipment, or tool. Understanding its features and giving it a little care will enable maximum performance. Keep this guide for an optimal flowlight experience!

OPTIMIZING YOUR GLOW – UNDERSTANDING YOUR BATTERIES

We designed the flowlight to run all 3 LEDs at optimum brightness off 1 AAA battery using a DC-DC voltage converter – this means you can use common rechargeable batteries and your flowlights will run at full brightness for the life of the battery - it does not dim over the course of the night, only in the last minutes when it's time to change your battery (<0.9V).

How long does a battery last? With NiMH rechargeables or high quality alkalines, flowlights normally last for 3+ hours in “bold” mode, 7+ hours in most of other modes.

Cheapo disposable batteries and rechargeable alkalines may last less than 30 minutes, as they cannot handle the flowlight’s current draw. NiCD batteries do not hold much charge.

High-quality alkalines might last as long as rechargeables, but they do not maintain their voltage well under heavy loads and may cause faulty behavior. Also they will cost more than rechargeables after just a few uses. We offer great rechargeable NiMH for \$1/battery!

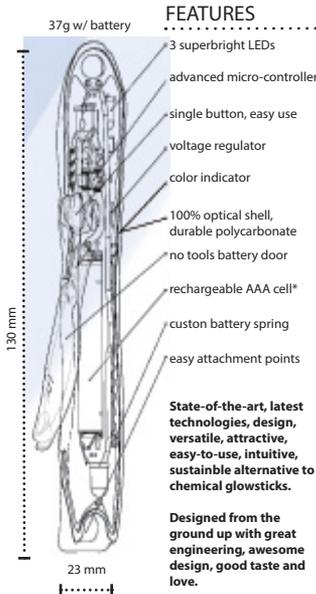
How long will a rechargeable battery hold its charge? Typical NiMH rechargeables hold a good charge for a few weeks. After that they may have less than 50% of their charge left, so we recommend charging batteries within a week of any important uses, like festivals, parties or performances.

Tip: If you use rechargeable NiMHs, charge them shortly before use!

FLOWLIGHT COLORS

Flowlights come in a variety of colors to suit your style: **Elements series:** Air, Water, Fire, Earth and Spirit; and **Astral series:** Sol, Luna, Nebula and Spectrum. There are also limited edition colors! Check flowtoys.com for the latest colors. There is a color indicator printed on the right side of the circuit board between the button and battery door – the LEDs are colored accordingly.

FEATURES AND OPERATING INSTRUCTIONS



FEATURES

- 37g w/ battery
- 3 superbright LEDs
- advanced micro-controller
- single button, easy use
- voltage regulator
- color indicator
- 100% optical shell, durable polycarbonate
- no tools battery door
- rechargeable AAA cell*
- custom battery spring
- easy attachment points

State-of-the-art, latest technologies, design, versatile, attractive, easy-to-use, intuitive, sustainable alternative to chemical glowsticks.

Designed from the ground up with great engineering, awesome design, good taste and love.

- Bright:** 3 regulated ultrabright LEDs provide maximum brightness for entire battery life.
- Long lasting:** if left on continuously, with good fully charged NiMH batteries, the flowlight lasts 4 hours on "bold" mode and 7 hours on other modes.
- Durable:** high impact polycarbonate shell, rugged circuit board, surface mount components.
- Easy to use:** intuitive one-button operation. Easy battery access with no screwdriver required. Radical design!
- Sustainable:** replaces chemical glowsticks, runs on 1 AAA battery, rechargeable, repairable, built to last.
- Low battery indicator:** single blinking LED tells you when to charge change your battery.
- Favorite mode recall:** remembers which mode you were in last, so you can access it without navigating through other modes.
- State-of-the-art:** "ATtiny24" micro-controller is super-efficient and powerful for complex functionality and programming.
- Beautiful design:** carefully designed to optimize light distribution, durability, functionality, look and feel.

FLOWLIGHT MODES

There are 11 different light modes in every flowlight designed for a variety of applications from ambient lighting to a convenient flashlight to safety lighting and of course modes that leave awesome trails when you are moving!

Navigation: There are 2 dimension of modes with 11 different light patterns. The first dimension has 5 modes and the second dimension has 6 modes. Activate your flowlight by pressing the single button above the battery door to get to "Breathe" (dimension 1, mode 1). Press the button again to reach the next mode. To enter the next dimension, hold the button down until the flowlight blinks. Press the button to navigate within this dimension. At any point you can turn the flowlight off by holding the button down for just under 2 seconds.

Superbright modes: After D2 mode 6, the light enters D1 mode1 in superbright. Continue pressing the button to navigate through all 11 modes in superbright - note that this runs the battery twice as hard, using up the battery in less than half the time, but is great for performance!

Spectrum: Please note that all 11 modes in Spectrum flowlights always run in superbright.

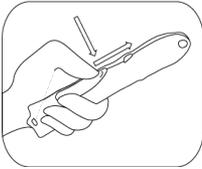
Memory mode: The flowlight remembers what mode it was in last. If the flowlight is off and you hold the button down, it will turn on, and enter the last mode it was in. This is particularly useful if you have a lot of lights, and always prefer the same mode.

	Mode	Description
Dimension 1	1 Breathe	peaceful glow: slowly fades in and out like the breath of a human at rest
	2 Bliss	mesmerizing: each LED fades independently at ever-changing rates
	3 Bold	bright: all LEDs on full power - useful, but shorter battery life
	4 Beat	solid strobe effect: only visible during movement, extends battery life
	5 Beacon	pulsing: like the heart rate of a person at peace; good camp marking light
Dimension 2	6 Bling	vivid alternating strobe: colors alternate for an eye-catching visual effect
	7 Beads	subtle overlapping strobe: colors blend alternately like beaded jewelry
	8 Blaze	blazing trails: pulsed 3-D effect resembling comets flying through the air
	9 Bounce	delightful alternation: lights appear to bounce up and down in the air
	10 Booyah!	complex effects: strobing, bouncing, alternating, blending...everything!
	11 Bounty	variety/demo mode: cycles through the modes, except breathe and beacon

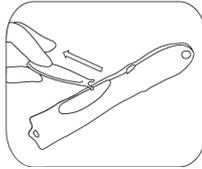
12-22 Superbright modes - starting from Breathe through Bounty! (except spectrum)

OPENING YOUR BATTERY DOOR

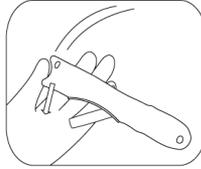
We designed the battery door so we wouldn't need a screwdriver to open it. The battery door fits within the flowlight's compact form and is designed to be secure, quick to open and help spread light around the battery without compromising the strength of the shell anymore than necessary. Sometimes opening the door can be challenging like a puzzle box, but there are several tricks to make it easy for everyone!



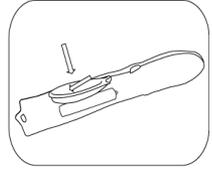
Push the front lip of the door **down and forwards** towards the button firmly. The back of the door should pop out. It may help to use a small object like a battery or the end of another flowlight.



Pull the door out to access the battery compartment. The antenna are very strong and durable. You can pull hard to remove the door. This is normal.



To remove the battery, pull on the clear battery pull tab, or tap the tail of the flowlight firmly against a firm surface. Battery may be snug.



Insert battery "+" end first towards the pointy head of the light. Ensure clear tab is placed correctly. Push battery "-" end down. Insert antennae of battery door. Push door down and back to secure it. Power up & enjoy!

Basically there is only **one direction in which you need to apply pressure** to the door to release it and there are several ways to apply that pressure:

There is a **slight lip at the tip of the door** and **the lip needs to go down towards the belly of the light, and forwards towards the head of the light**. There are "antennae" at the top of the battery door that need to be released before you can push the door forwards.

You can either use your thumb or another hard object (the tail end of another flowlight works really well) to push down and forwards on the tip of the door. Do not push on the main part of the door itself – this will not release the internal catch. Once you have released the battery door, you can pull firmly on the door to separate the door from the light and access the battery compartment. Visit flowtoys.com for video instructions and more.

Inserting and removing the battery

There is a transparent battery pull tab – make sure you insert the battery with the tab across the bottom of the compartment. Insert the positive end of the battery (pointy end) in the direction of the head of the flowlight (pointy end). Push the battery forwards and down. Pull the tab to release battery. A firm tap on a table or other semi-hard object will also pop the battery out of the compartment - we like using the edge of a bin when changing lots of batteries.

DURABILITY

While they serve as attractive ambient and safety lighting devices, many flowlights spend their lives being swung around, tossed, dropped and hit against each other. They are designed to handle the typical impacts of a kinetic lifestyle and we continually work to make this electronic device handle the kind of impacts that would destroy a well-built flashlight, cell-phone or wristwatch. However **nothing is indestructible!** Flowlights are electronic instruments - hard butterfly collisions and dropping your rigs over a hard floor may eventually break some lights - you might want to consider using protective crystal cases or practicing over carpeting or grass if you drop frequently.

Interesting note: We calculated the impact during a simple butterfly move to be over 100mph. The force during impact is equivalent to a 5 ton elephant standing on an iPod!

Please note: Chemical glowsticks release gaseous esters that break down polycarbonate and make it brittle. This can occur even if an uncracked glowstick is placed near polycarbonate, and is not a result of broken or leaking glow-sticks. Avoid exposure!

TROUBLESHOOTING

We have high quality control procedures, but some duds can still get through. However most apparently “faulty” flowlight behavior is easily remedied. A truly defective flowtoys product can always be sent back for free repair or replacement, but generally they just require a good battery or a little care!

Over 90% OF “FAULTY” FLOWLIGHT BEHAVIOR IS SIMPLY A BATTERY ISSUE!!!

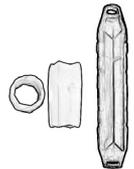
Single flashing LED? Does your flowlight turn off easily when bumped OR dim out OR turn off shortly after it has been turned on for no apparent reason? Charge/change you battery, clean your contacts, check the following:

- 1. Use only rechargeables or good alkalines.** The circuitry is optimized for rechargeables. The light is bright and draws a lot of power, so cheapo batteries don't last long, can't keep up and makes the light turn off easily. The difference can be the light lasting under 30 minutes or 7 hours!
- 2. Your battery is low.** Single flashing LED = low battery! Try a battery that you are sure is good; switch your batteries around to double check. Sometimes if you put in a fresh battery, it will indicate low battery mode - press the button to click through modes.
- 3. There is something obstructing battery contact!** Check that the clear battery pull tab is not wedged between your battery and the battery contact. Check that your batteries are clear of physical debris. The battery connection is tight, so the plastic cover on some batteries gets torn off a little and sticks to the underside of the battery, preventing a good connection.
- 4. There is oxidation on your contacts.** Do the battery or spring contacts have black marks or debris on them? This is oxidation from the battery's contacts caused by friction/vibration. Clean the battery and battery springs with your fingers, a clean cloth or eraser, and apply a tiny bit of petroleum jelly (vaseline) to the springs. This works wonders to prevent future oxidation and ensure electrical conductivity.

FLOWLIGHT ACCESSORIES

Flowlights were designed as a versatile pixel of light that can be used as a stand alone LED lightstick, as well as linked together in the Flowtoys Modular System to create poi, staffs, juggling clubs, martial flow props and more. Visit www.flowtoys.com for the whole range of accessories and possibilities.

Recommended: Get crystal cases to protect and cushion your flowlights, and flowmass to add more weight if you like heavier rigs. We also provide quality, comfortable handles and leashes.



LIFETIME WARRANTY

Our goal is to provide you with the best possible illuminated equipment for flow, and enable you to enjoy it for as long as possible. While we can't guarantee that flowlights will not break, we do want to enable you to enjoy them freely and offer a fair and flexible **lifetime warranty**. Contact us at info@flowtoys.com if you have any questions.

DO GOOD. BE AWESOME.

Visit www.flowtoys.com for more information, videos instructions and tips!