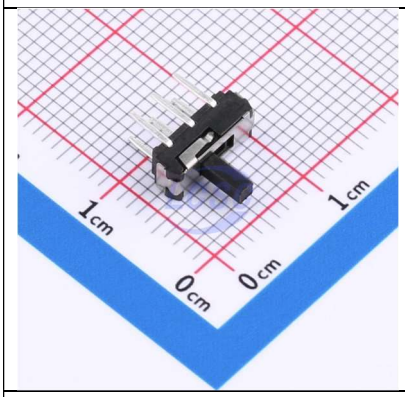
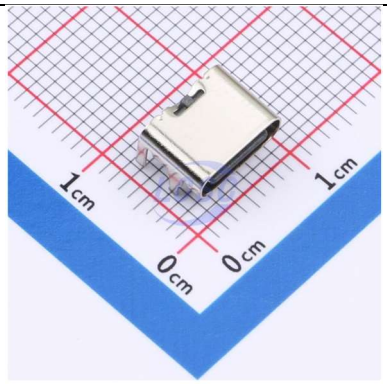
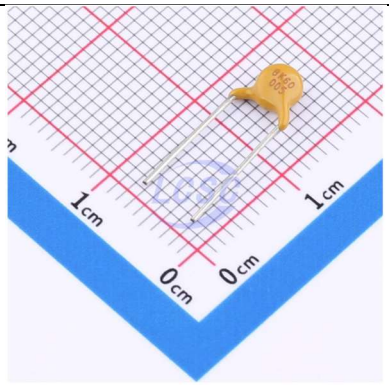
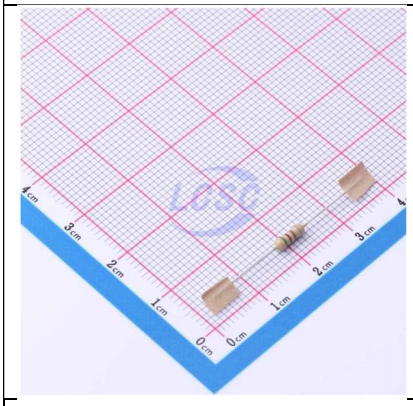
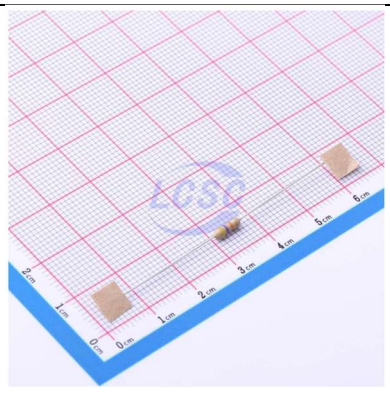
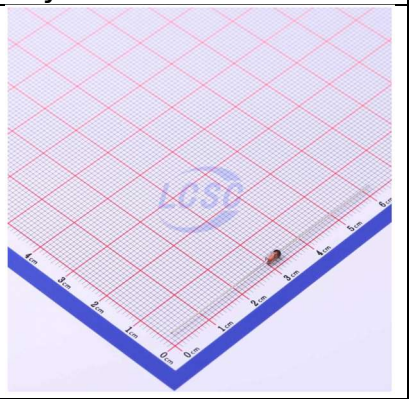
RIT SHED Makerspace

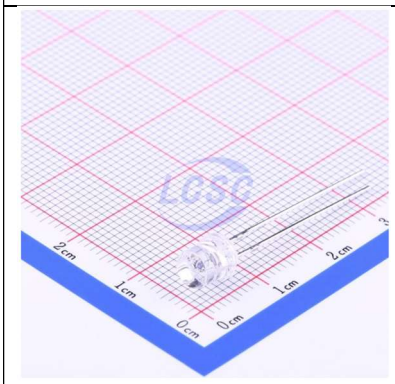
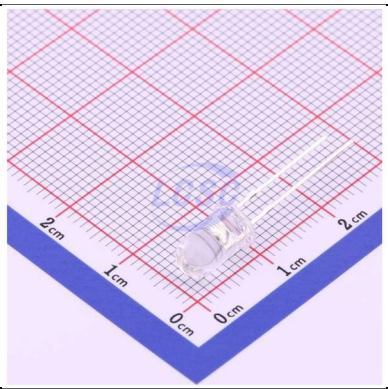
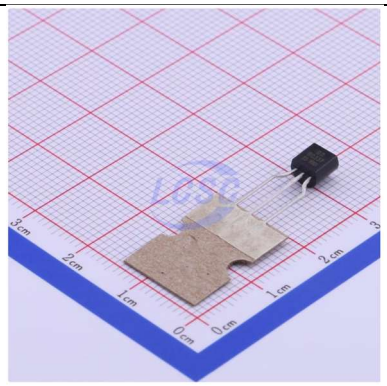
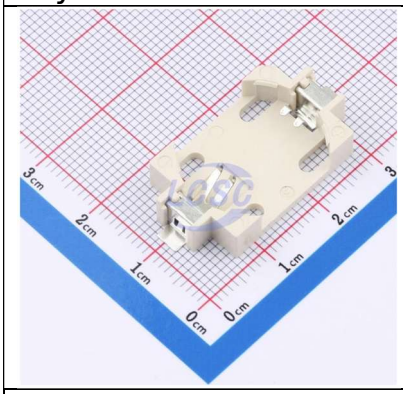
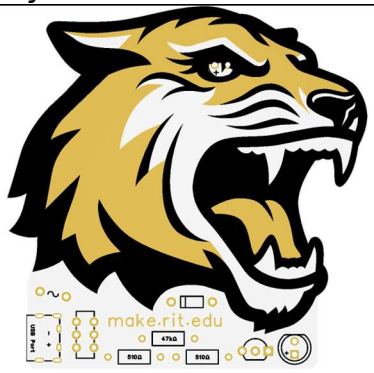
Tiger Badge Soldering Kit

V1.2 | September 2025 | Open Source: CERN-OHL-S

Parts List:

DPDT Switch Qty: 1	USB-C Port Qty: 1	PolyFuse Qty: 1
		
Used to select between USB power and coin cell battery power. Polarity doesn't matter, install it any way it'll fit into the board.	Power your device without draining the battery. **Must be installed on the BACK of the board!**	Protect your USB port from overcurrent. Polarity doesn't matter.
510Ω Resistor Qty: 2	**47kΩ Resistor** Qty: 1	**Zener Diode** Qty: 1
		
Identified by color bands; Green, Brown, Brown, Gold	Slightly smaller than 510Ω resistors, identified by color bands: Yellow, Violet, Orange, Gold	**Diodes have polarity!** Match the end with a black band (cathode) to the line on the PCB.

Parts List, Cont.:

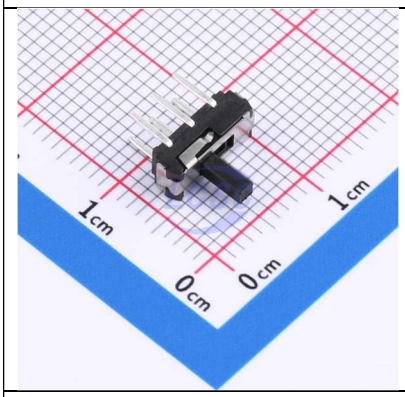
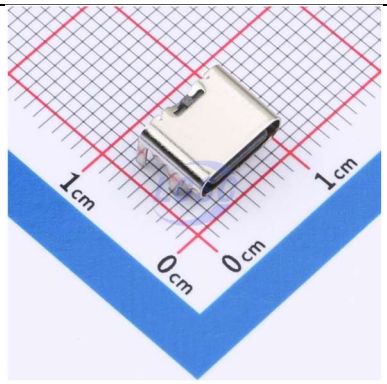
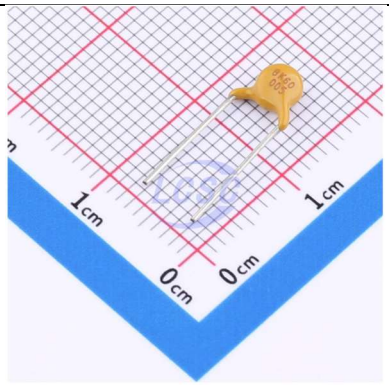
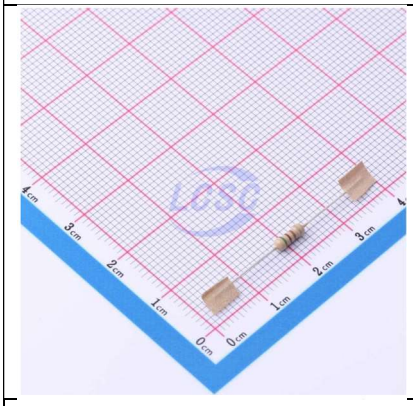
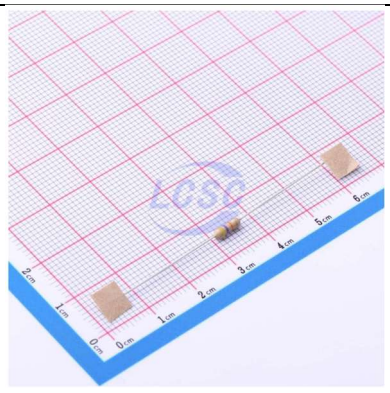
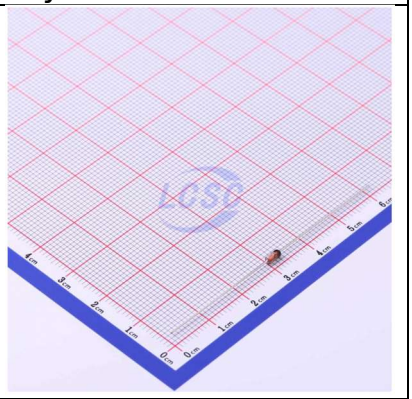
Phototransistor Qty: 1	LED Qty: 1	NPN Transistor Qty: 1
		
Part with a flat, clear top. Detects light intensity. Has polarity! **LONG LEG IS POSITIVE!**	Light Emitting Diode. Part with round, clear top. Glows a set color when power is applied. Has polarity! **LONG LEG IS POSITIVE!**	Electrical switch, turns on LED when dark. Has polarity! **Match curve of plastic body to curve on PCB!**
Battery Holder Qty: 1	**PCB** Qty: 1	**Coin Cell 2032** Qty: 1
		
Surface mount, goes on back of PCB. Powers the circuit when not on USB. Polarity matters! **Match "+" in plastic to "+" printed on PCB!**	Printed Circuit Board, all parts are soldered to this. Copper under the white solder mask connect the parts together.	CR2032 battery, install positive side up! **Ask staff for help installing properly.**

RIT SHED Makerspace

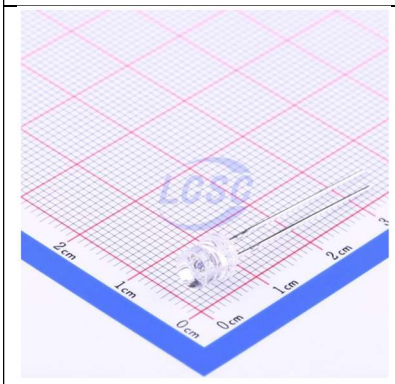
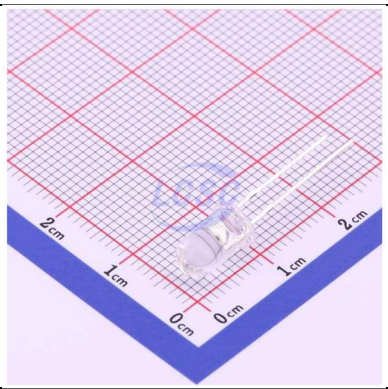
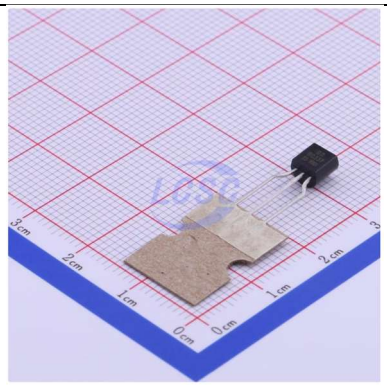
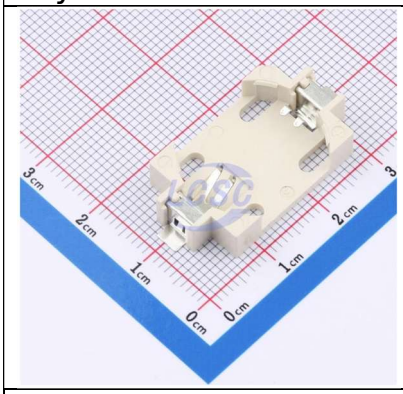
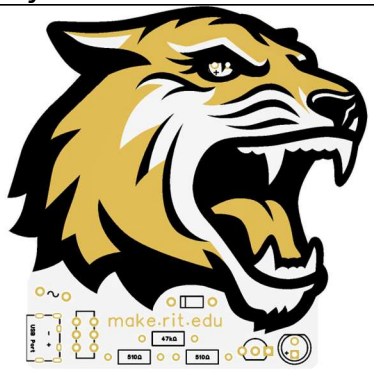
Tiger Badge Soldering Kit

V1.2 | September 2025 | Open Source: CERN-OHL-S

Parts List:

DPDT Switch Qty: 1	USB-C Port Qty: 1	PolyFuse Qty: 1
		
Used to select between USB power and coin cell battery power. Polarity doesn't matter, install it any way it'll fit into the board.	Power your device without draining the battery. **Must be installed on the BACK of the board!**	Protect your USB port from overcurrent. Polarity doesn't matter.
510Ω Resistor Qty: 2	**47kΩ Resistor** Qty: 1	**Zener Diode** Qty: 1
		
Identified by color bands; Green, Brown, Brown, Gold	Slightly smaller than 510Ω resistors, identified by color bands: Yellow, Violet, Orange, Gold	**Diodes have polarity!** Match the end with a black band (cathode) to the line on the PCB.

Parts List, Cont.:

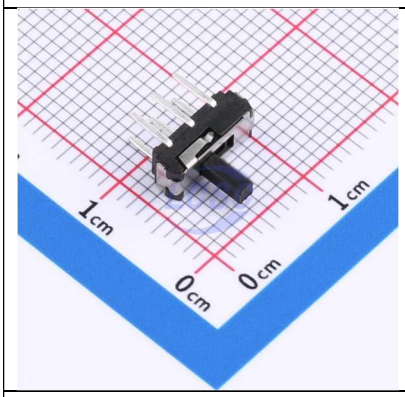
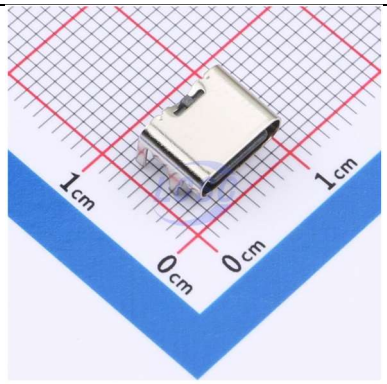
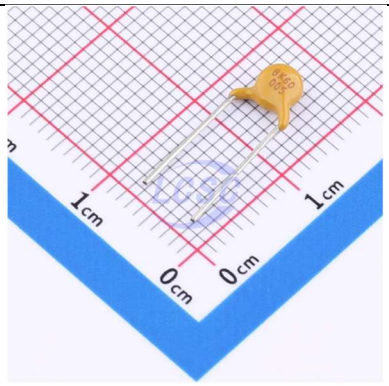
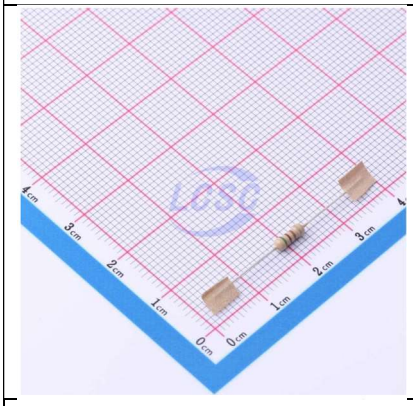
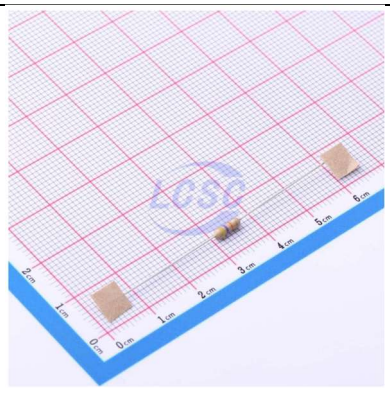
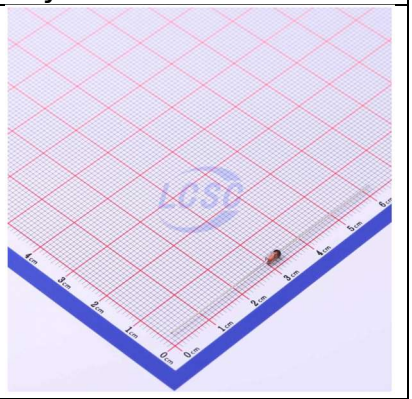
Phototransistor Qty: 1	LED Qty: 1	NPN Transistor Qty: 1
		
Part with a flat, clear top. Detects light intensity. Has polarity! **LONG LEG IS POSITIVE!**	Light Emitting Diode. Part with round, clear top. Glows a set color when power is applied. Has polarity! **LONG LEG IS POSITIVE!**	Electrical switch, turns on LED when dark. Has polarity! **Match curve of plastic body to curve on PCB!**
Battery Holder Qty: 1	**PCB** Qty: 1	**Coin Cell 2032** Qty: 1
		
Surface mount, goes on back of PCB. Powers the circuit when not on USB. Polarity matters! **Match "+" in plastic to "+" printed on PCB!**	Printed Circuit Board, all parts are soldered to this. Copper under the white solder mask connect the parts together.	CR2032 battery, install positive side up! **Ask staff for help installing properly.**

RIT SHED Makerspace

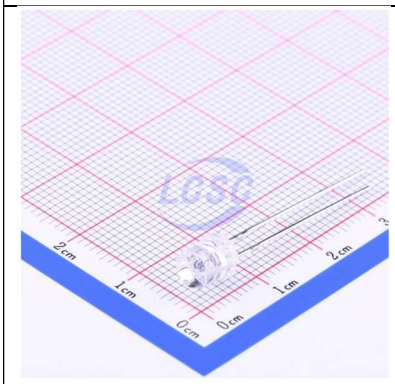
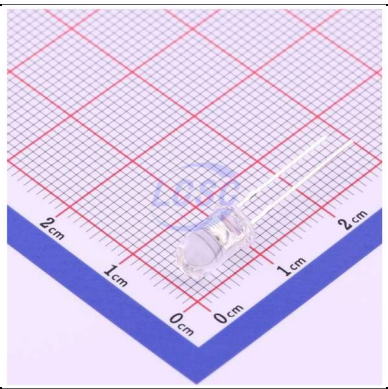
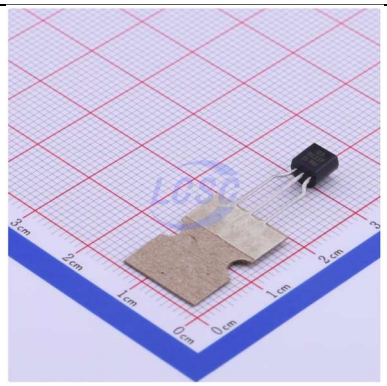
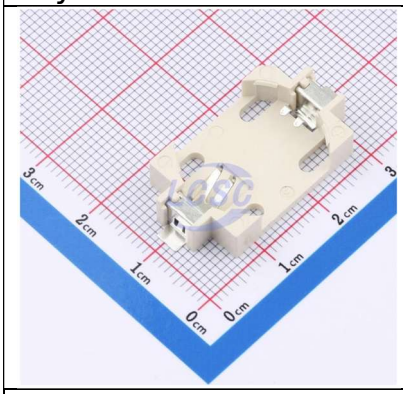
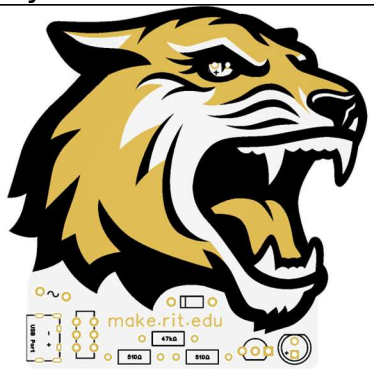
Tiger Badge Soldering Kit

V1.2 | September 2025 | Open Source: CERN-OHL-S

Parts List:

DPDT Switch Qty: 1	USB-C Port Qty: 1	PolyFuse Qty: 1
		
Used to select between USB power and coin cell battery power. Polarity doesn't matter, install it any way it'll fit into the board.	Power your device without draining the battery. **Must be installed on the BACK of the board!**	Protect your USB port from overcurrent. Polarity doesn't matter.
510Ω Resistor Qty: 2	**47kΩ Resistor** Qty: 1	**Zener Diode** Qty: 1
		
Identified by color bands; Green, Brown, Brown, Gold	Slightly smaller than 510Ω resistors, identified by color bands: Yellow, Violet, Orange, Gold	**Diodes have polarity!** Match the end with a black band (cathode) to the line on the PCB.

Parts List, Cont.:

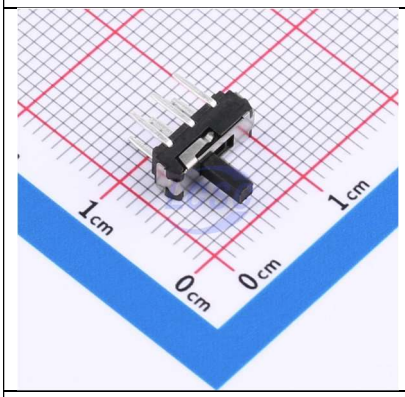
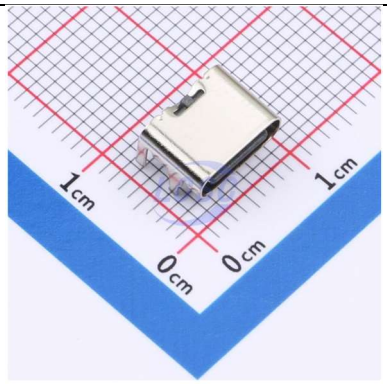
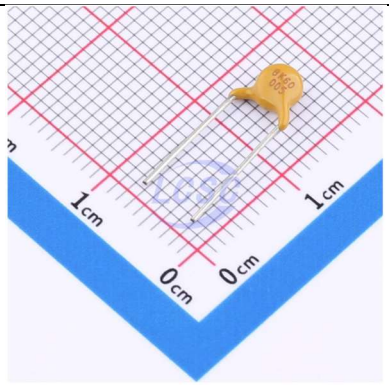
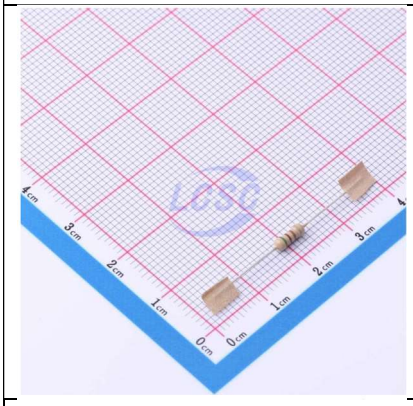
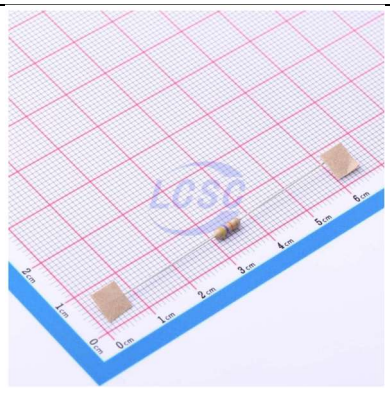
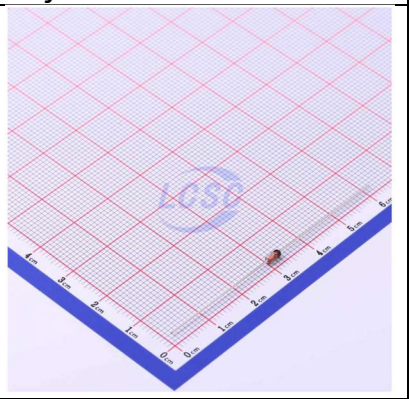
Phototransistor Qty: 1	LED Qty: 1	NPN Transistor Qty: 1
		
Part with a flat, clear top. Detects light intensity. Has polarity! **LONG LEG IS POSITIVE!**	Light Emitting Diode. Part with round, clear top. Glows a set color when power is applied. Has polarity! **LONG LEG IS POSITIVE!**	Electrical switch, turns on LED when dark. Has polarity! **Match curve of plastic body to curve on PCB!**
Battery Holder Qty: 1	**PCB** Qty: 1	**Coin Cell 2032** Qty: 1
		
Surface mount, goes on back of PCB. Powers the circuit when not on USB. Polarity matters! **Match "+" in plastic to "+" printed on PCB!**	Printed Circuit Board, all parts are soldered to this. Copper under the white solder mask connect the parts together.	CR2032 battery, install positive side up! **Ask staff for help installing properly.**

RIT SHED Makerspace

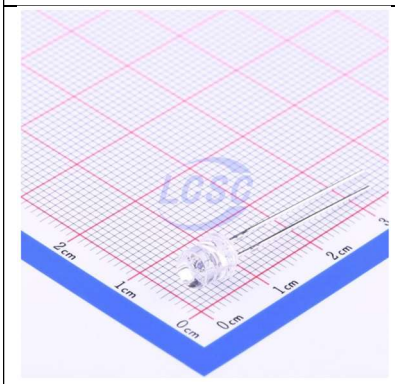
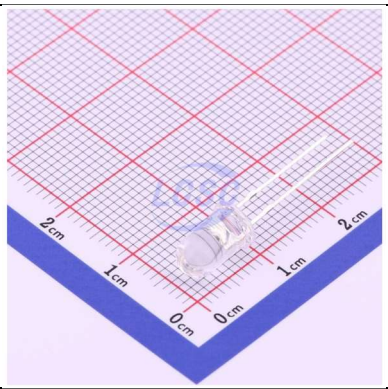
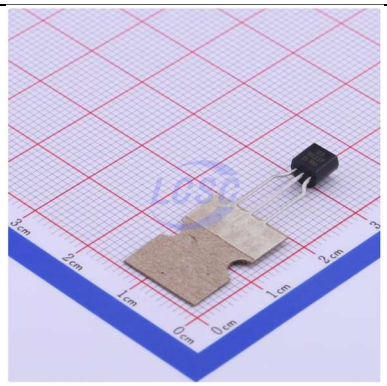
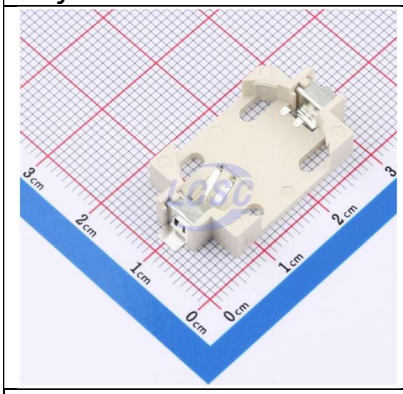
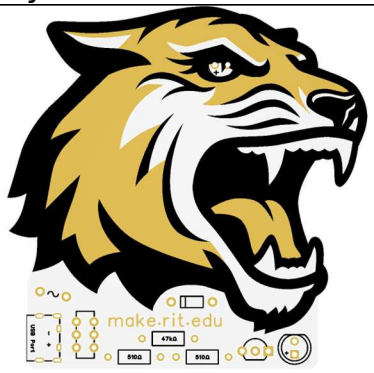
Tiger Badge Soldering Kit

V1.2 | September 2025 | Open Source: CERN-OHL-S

Parts List:

DPDT Switch Qty: 1	USB-C Port Qty: 1	PolyFuse Qty: 1
		
Used to select between USB power and coin cell battery power. Polarity doesn't matter, install it any way it'll fit into the board.	Power your device without draining the battery. **Must be installed on the BACK of the board!**	Protect your USB port from overcurrent. Polarity doesn't matter.
510Ω Resistor Qty: 2	**47kΩ Resistor** Qty: 1	**Zener Diode** Qty: 1
		
Identified by color bands; Green, Brown, Brown, Gold	Slightly smaller than 510Ω resistors, identified by color bands: Yellow, Violet, Orange, Gold	**Diodes have polarity!** Match the end with a black band (cathode) to the line on the PCB.

Parts List, Cont.:

Phototransistor Qty: 1	LED Qty: 1	NPN Transistor Qty: 1
		
Part with a flat, clear top. Detects light intensity. Has polarity! **LONG LEG IS POSITIVE!**	Light Emitting Diode. Part with round, clear top. Glows a set color when power is applied. Has polarity! **LONG LEG IS POSITIVE!**	Electrical switch, turns on LED when dark. Has polarity! **Match curve of plastic body to curve on PCB!**
Battery Holder Qty: 1	**PCB** Qty: 1	**Coin Cell 2032** Qty: 1
		
Surface mount, goes on back of PCB. Powers the circuit when not on USB. Polarity matters! **Match "+" in plastic to "+" printed on PCB!**	Printed Circuit Board, all parts are soldered to this. Copper under the white solder mask connect the parts together.	CR2032 battery, install positive side up! **Ask staff for help installing properly.**