Barcode Comparison Chart

There are a wide variety of barcode types you can print on plastic cards. In this comparison chart, we will discuss most of them. You will learn what they are used for, the length and requirements of each barcode type, and any other facts that will help you decide which barcode to print on your plastic cards.

Q: What is the minimum font size for a barcode?
A: As a general rule of thumb, the smallest font we recommend is at least 12pt (12 point). Anything smaller than that font size, the barcode will not scan properly. - As for the the barcode length, please refer to the table below for your desired barcode type.

Barcode cards can be used to load value onto gift cards, by encoding data on it that your POS (point of sale) can read.

Barcode Type	# of Characters	Mostly Used For:	May Consist of:
Type 39 	39 barcode can be of unlimited length. Some sources say 43 characters should be max, to allow optimal scanning.	Mostly used for "Variable Data", so each card is printed and scanned with its own unique number.	• All uppercase letters A-Z, • Numbers 1 through 9, • Symbols including space, period, plus, minus, dollar sign, slash, and percent.
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Type 128 	Unlimited	Commonly used in the shipping & packaging industry, by companies such as Amazon. Human readable numbers on 128 barcodes can be printed above,	• Digits: 0-9 • Letters: A-Z (upper and lower case) • All 128 ASCII characters and control codes

		below, right or left of the barcode. However, it's most common to print it below the barcode.	
Interleaved 2 of 5 (Code 25, ITF, I25)  	**Min. Characters:** 2 digits Even number of digits required. If you don't have a even number, a leading 0 (zero) will be added in front. If a checksum is needed, Then odd number is required so it will even out with the final checksum.	Commonly used in the shipping & packaging industry.	Numbers only
UPC-A  	11 digits + 1 checksum digit. **Customer should supply 11 digits** and the 12'th check digit is auto generated.	Retail products in USA & Canada This barcode identifies the manufacturer of a product which allows people and businesses to look up the price. This barcode is very helpful for retailers. It can be used for returns or to check the price of an item that hasn't been marked in the store. UPC-A barcode consists of 12 numbers. The first number indicates which numbering system is being used, the next 5 indicate the	Numbers only

		manufacturer of the product, the 5 after that indicate the type of product, and the last number is a Modulo 10 checksum.	
UPC-E  	7 digits + 1 checksum digit. **Customer should supply 7 digits** and the 8'th check digit is auto generated.	Retail products in USA and Canada. Ideal UPC code for products with limited label space.	Numbers only
EAN-13  	12 digits + 1 checksum digit. **Customer should supply 12 digits** and the 13'th check digit is auto generated.	Worldwide retail goods that are shipping from country to country. EAN-13 barcodes consists of a 2 or 3 number code that indicates what country the product is from, 4 of 5 data digits, and a checksum digit.	Numbers only
EAN-8  	7 digits + 1 checksum digit. **Customer should supply 7 digits** and the 8'th check digit is auto generated.	The EAN-8 barcode includes 4 to 5 numbers that are considered data digits, a 2 or 3-digit country code, and a checksum number. EAN-8 barcode is primarily used when trying to use the least amount of space possible on the package. The barcode is only issued when another barcode takes up too much space.	Numbers only

QR Code 	Numeric only, max characters: **7,089** Alphanumeric max characters: **4,296** Binary/byte max characters: **2,953** Kanji/kana max characters: **1,817**	A QR code is a fairly recent phenomenon that is becoming increasingly popular on custom plastic card printing. Basically, you scan it using a smartphone or other electronic device and it initiates an action. For example, scanning a QR code may open any website URL or download an app to your phone. These codes can easily be generated for free online.	All ASCII characters
PDF417 	Alphanumeric max: **1850** Numeric characters max: **2725**	PDF417 barcodes are used to print postage accepted by USPS. It's also commonly used by major airlines for boarding passes. PDF417 is also used by the Department of Homeland Security for RealID, driver licenses and state issued ID cards. FedEx also uses it on their package labels.	All ASCII characters
Data Matrix	Alphanumeric max: **2335** Numeric characters max: **3116**	DataMatrix is used to encode product and serial number information on electrical rating plates; to mark	All ASCII characters

		of surgical instruments; to identify lenses, circuit boards, and other items during manufacturing.	