

# File path (Windows)

Windows file path with drive letter.

```
^[a-zA-Z]:\\(?:[^\\"/:*?"<>|\r\n]+\\\)*[^\\"/:*?"<>|\r\n]*$
```

## Token-by-token breakdown

| Token               | Meaning                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------|
| ^                   | start of string (or line in multiline mode)                                             |
| [a-zA-Z]            | any of: lowercase letters, uppercase letters                                            |
| :                   | literal text ":"                                                                        |
| \\                  | literal "\"                                                                             |
| (?:                 | start of a non-capturing group                                                          |
| [^\\"/:*?"<> \r\n]+ | one or more: any character except "\", "/", ":", "*", "?", ":", "<", ">", " ", "r", "n" |
| \\                  | literal "\"                                                                             |
| )*                  | end of group, zero or more                                                              |
| [^\\"/:*?"<> \r\n]* | zero or more: any character except "\", "/", ":", "*", "?", "<", ">", " ", "r", "n"     |
| \$                  | end of string (or line in multiline mode)                                               |

## Quick usage in 7 languages

|            |                                                                                                                                                               |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| JavaScript | <pre>const re = /^[a-zA-Z]:\\(?:[^\\"/:*?"&lt;&gt; \r\n]+\\\)*[^\\"/:*?"&lt;&gt; \r\n]*\$/;<br/>re.test(value);</pre>                                         |
| Python     | <pre>import re<br/>re.match(r'^[a-zA-Z]:\\(?:[^\\"/:*?"&lt;&gt; \r\n]+\\\)*[^\\"/:*?"&lt;&gt; \r\n]*\$', value)</pre>                                         |
| Java       | <pre>Pattern.compile("^[a-zA-Z]:\\\\(?:[^\\"/:*?\"&lt;&gt; \\\\r\\\\n]+\\\\\\\\)*[^\\"/:*?\"&lt;&gt; \\\\r\\\\n]*\$")<br/>) .matcher(value) .matches();</pre> |
| C# / .NET  | <pre>Regex.IsMatch(value, @"^[a-zA-Z]:\\(?:[^\\"/:*?"&lt;&gt; \r\n]+\\\)*[^\\"/:*?"&lt;&gt; \r\n]*\$");</pre>                                                 |
| Go         | <pre>regexp.MustCompile(`^[a-zA-Z]:\\(?:[^\\"/:*?"&lt;&gt; \r\n]+\\\)*[^\\"/:*?"&lt;&gt; \r\n]*\$`).MatchString(value)</pre>                                  |
| Ruby       | <pre>/^[a-zA-Z]:\\(?:[^\\"/:*?"&lt;&gt; \r\n]+\\\)*[^\\"/:*?"&lt;&gt; \r\n]*\$/ .match?(value)</pre>                                                          |
| PHP        | <pre>preg_match('~^[a-zA-Z]:\\(?:[^\\"/:*?"&lt;&gt; \r\n]+\\\)*[^\\"/:*?"&lt;&gt; \r\n]*\$~', \$value);</pre>                                                 |

## Common pitfalls

- **Anchored to the whole string.** This pattern uses ^ and \$, so it requires the entire input to match. To find it inside a longer text, drop the anchors and use the global (g) flag.
- **ASCII letters only.** [a-zA-Z] excludes accented and non-Latin letters (é, ü, ß, ñ, and non-Latin scripts). For international input use Unicode properties like \p{L} with the u flag.
- **Watch for backtracking.** This pattern nests quantifiers; on adversarial input that can cause exponential backtracking (ReDoS). Test with long non-matching strings, or use an RE2-based engine.
- **Escape it correctly per language.** In Java and JavaScript strings each backslash must be doubled (\\d); in Python, Go, and C# use raw/verbatim strings so the backslashes survive.

- **Validate beyond format.** Matching the format doesn't guarantee the value is real. Confirm the file path (windows) against a source of truth (database, API, or checksum) where it matters.