

# The fontspec test suite

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## Preamble

The examples shown in the remainder of the document are generated directly from the code shown alongside. As well as being good minimal examples, these tests are useful to ensure that changes to fontspec don't affect old behaviour.

When the test suite is run, the new output is compared pixel by pixel with that shown here and warnings produced if the outputs are not identical (within a small tolerance to account for rounding errors).

Tests with a name that begins with 'X' are processed with `xelatex` only; 'L' with `lualatex`; and 'F' with both. In the latter case, the output from both engines is compared with each other, ensuring that the package is consistent cross-platform.

To generate tests yourself, write a new file in the `testsuite/` folder with filename

`⟨FL,X⟩⟨num⟩⟨letter⟩.ltx`

according to the naming scheme above and the following numbering scheme. If you are writing a new test entirely, increment the `⟨num⟩`; if you are writing a variation on an old test, increment the `⟨letter⟩`. No need to be too fussy, though.

After writing the new test, run

`make initest`

This will generate the reference output (`*.safe.pdf`) from which to check all future tests. After any changes have been made to fontspec, the entire test suite is compiled with

`make check`

If you want to run just a single test, use

`make ⟨testname⟩`

(but this syntax *may* be fragile and need to be changed in the future).

## 1 Test F001a-basic-loading

```
\documentclass{testsuite}
\usepackage{fontspec}
\setmainfont[Ligatures=TeX]{TeX Gyre Pagella}
\begin{document}
Hello, moon!\par
\textsc{small caps}\par
`--Punctuation---'

\def\itdefault{sl}
\setmainfont{Verdana}
Testing \textsl{slanted} edge case.
\end{document}
```

Hello, moon!

SMALL CAPS

'--Punctuation--'

Testing *slanted* edge case.

## 2 Test F001b-emph

```
\documentclass{testsuite}
\usepackage{fontspec}
\renewcommand\eminnershape{\upshape\scshape}
\begin{document}
\setmainfont[
  ItalicFont=texgyrepagella-italic.otf
]{texgyrepagella-regular.otf}
hello \emph{emph \emph{2emph} emph} hello

hello {\em emph {\em 2emph} emph} hello
\end{document}
```

hello *emph* 2**EMPH** *emph* hello

hello *emph* 2**EMPH** *emph* hello

## 3 Test F002a

```
\documentclass{testsuite}
\usepackage{fontspec}
\setmainfont[Color=FF0000]{Georgia}
\def\1{abcABC}\def\2{XYZxyz}
\def\test{\1\textsf{\2}\1\}
\begin{document}
\setsansfont{Verdana}
\test
\setsansfont[Scale=0.5]{Verdana}
\test
\setsansfont[Scale=MatchLowercase]{Verdana}
\test
\setsansfont[Scale=MatchUppercase]{Verdana}
\test
\end{document}
```

abcABCXYZxyzabcABC  
abcABC<sub>XYZxyz</sub>abcABC  
abcABCXYZxyzabcABC  
abcABCXYZxyzabcABC

## 4 Test F003a

```
\documentclass{testsuite}
\usepackage{fontspec}
\usepackage{xcolor}
\begin{document}
{\fontspec{Color=5500FF}{Verdana}Test}

{\fontspec{Color=red}{Verdana}Test} vs
{\color{red}\fontspec{Verdana}Test}

\definecolor{Foo}{rgb}{0.3,0.4,0.5}
{\fontspec{Color=Foo}{Verdana}Test} vs
{\color{Foo}\fontspec{Verdana}Test}
\end{document}
```

Test

Test vs Test

Test vs Test

## 5 Test F003b

```
\documentclass{testsuite}
\usepackage{fontspec}
\usepackage{xcolor}
\begin{document}
\fontspec[Color=red]{Verdana}
Test

\fontspec[
  Color=red,Opacity=0.5
]{Verdana}
Test
\end{document}
```

Test

Test

## 6 Test F003c

```
\documentclass{testsuite}
\usepackage{fontspec}
\usepackage{xcolor}
\begin{document}
\fontspec{Verdana}
Black
\color{red}
Red

\fontspec[Color=red]{Verdana}
\color{blue}
Red?
\end{document}
```

Black Red

Red?

## 7 Test F004a

```
\documentclass{testsuite}
\usepackage{fontspec}
\usepackage{xcolor}
\begin{document}
\fontspec[ SizeFeatures={
  {Size={-8}, Font=TeX Gyre Bonum Italic, Color=AA0000},
  {Size={8-14}, Color=00AA00},
  {Size={14-}, Color=0000AA}} ]{TeX Gyre Chorus}

{\scriptsize Small\par} Normal size\par {\Large Large\par}
\end{document}
```

*Small*

*Normal size*

*Large*

## 8 Test F005a

```
\documentclass{testsuite}
\usepackage{fontspec}
\begin{document}
\Huge
\fontspec{Junicode}
Before
\addfontfeature{StylisticSet=6}
After
\end{document}
```

Before After

## 9 Test F006a

```
\documentclass{testsuite}
\usepackage{fontspec}
\begin{document}
\def\text{\fbox{\parbox{1.55cm}{%
  EXAMPLE HYPHENATION%
}}\hfill}

\fontspec{TeX Gyre Termes}
\addfontfeature{HyphenChar=None}
\text
\addfontfeature{HyphenChar={+}}
\text
\addfontfeature{HyphenChar={"2A}}
\text
\end{document}
```

EXAMPLE  
HYPHENATION

EX+  
AMPLE  
HY+  
PHEN+  
ATION

EX\*  
AMPLE  
HY\*  
PHEN\*  
ATION

## 10 Test F100a

```
\documentclass[twocolumn]{testsuite}
\usepackage{fontspec}
\begin{document}
\setmainfont{texgyretermes-regular.otf}
\setmonofont{Inconsolata.otf}
\verb|testing spaces|
\verb*|testing spaces|
\begin{verbatim}
testing spaces
\end{verbatim}
\begin{verbatim*}
testing spaces
\end{verbatim*}
\newpage
\setmonofont{Courier New}
\verb|testing spaces|
\verb*|testing spaces|
\begin{verbatim}
testing spaces
\end{verbatim}
\begin{verbatim*}
testing spaces
\end{verbatim*}
\end{document}
```

testing spaces	testing spaces
testing_spaces	testing_spaces
testing spaces	testing spaces
testing_spaces	testing_spaces

## 11 Test F100b

```
\documentclass[twocolumn]{testsuite}
\usepackage{fontspec,verbatim}
\begin{document}
\setmainfont{texgyretermes-regular.otf}
\setmonofont{Inconsolata.otf}
\verb|testing spaces|\\
\verb*|testing spaces|
\begin{verbatim}
testing spaces
\end{verbatim}
\begin{verbatim*}
testing spaces
\end{verbatim*}
\newpage
\setmonofont{Courier New}
\verb|testing spaces|\\
\verb*|testing spaces|
\begin{verbatim}
testing spaces
\end{verbatim}
\begin{verbatim*}
testing spaces
\end{verbatim*}
\end{document}
```

testing spaces	testing spaces
testing_spaces	testing_spaces
testing spaces	testing spaces
testing_spaces	testing_spaces

## 12 Test F100c

```
\documentclass[twocolumn]{testsuite}
\usepackage{fontspec,moreverb}
\begin{document}
\setmainfont{texgyretermes-regular.otf}
\setmonofont{Inconsolata.otf}
\begin{listing}{7}
testing spaces
\end{listing}
\begin{listing*}{7}
testing spaces
\end{listing*}
\end{document}
```

```
7 testing spaces
7 testing_spaces
```

## 13 Test F100d

```
\documentclass[twocolumn]{testsuite}
\usepackage{fontspec,listings}
\begin{document}
\begin{lstlisting}
testing spaces
\end{lstlisting}
\begin{lstlisting}[showspaces]
testing spaces
\end{lstlisting}
\end{document}
```

```
testing spaces
testing_spaces
```

## 14 Test F100e

```
\documentclass[twocolumn]{testsuite}
\usepackage{fontspec,fancyvrb}
\begin{document}
\begin{Verbatim}
testing spaces
\end{Verbatim}
\begin{Verbatim*}
testing spaces
\end{Verbatim*}
\end{document}
```

testing spaces

testing spaces

## 15 Test F200a-test-prog

```
\documentclass{testsuite}
\usepackage{fontspec}
\begin{document}
\ExplSyntaxOn
LM~is
\fontspec_if_fontspec_font:TF {\ERROR}{~not~a~fontspec~font.~\par}

\setmainfont{TeX~ Gyre~ Pagella}
TeX Gyre Pagella
\fontspec_if_fontspec_font:TF {~is~a~fontspec~font.~\par}{\ERROR}
\fontspec_if_opentype:TF {,~is~OpenType}{\ERROR}
\fontspec_if_feature:nTF {smcp}{,~has~small~caps}{\ERROR}
\fontspec_if_current_script:nTF {latn}{,~is~using~Latin~script}{\ERROR}
\fontspec_if_script:nTF {cyr1}{,~also~has~Cyrillic}{\ERROR}

\fontspec_if_current_language:nTF {DFLT}{,~is~using~`default'~language}{\ERROR}
\fontspec_if_language:nnTF {latn}{ROM}{,~also~has~Romanian}{\ERROR}

\end{document}
```

LM is not a fontspec font.

TeXGyrePagella is a fontspec font, is OpenType, has small caps, is using Latin script, also has Cyrillic, is using `default' language, also has Romanian